he best-selling RISC OS magazine in the world

1 A PHOEBE RISC PC II

http://www.acornuser.com/

ACORN USER

200 not out!

Acorn User CD 4

How does Phoebe match up to her opponents?

CD Writers compared

Acorn World Show '98

What, where and when!

IDG MEDIA
Global Vision Total Knowledge

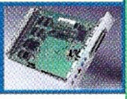
ISSUE 200 NOV 1998 £3.95

CASTLE TECHNOLOGY

FOR ALL YOUR ACORN HARDWARE & PERIPHERALS

INTERFACES

25% off when bought with drive or scanner etc



CT's Storm SCSI interface offers unbeatable performance. Using 15MB/s SCSI components and our ultra-reliable SCSI FS, Storm's a guaranteed winner.

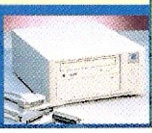
	Ex VAT	Inc VAT
A30x0 IDE interface kit - 2.5" hard drive	£52	£61.10
A3020 fixing kit - 2.5" hard drive	£8	£9.40
A3/400 IDE interface for 2.5" & 3.5" h.d.	£60	£70.50
Storm8 SCSI2 interface - A30x0 A4000	£88	£103.40
Storm16 SCSI2 i/f - A300/A400 A5/7000	£96	£112.80
StormDMA32 SCSI2 i/f RPC Phoebe	£128	£150.40
StormPCI UltraWide SCSI i/f (Oct '98)	£199	£233.83
Storm16 SCSI2/10BaseT Ethernet i/f	£148	£173.90
Storm16 SCSI2/10BaseT&2 Ethernet i/f	£196	£230.30

HARD DRIVES (BARE)

120MB A3000/A3010 interface included	£95	£110.45
120MB A3020 fitting kit included	£59	£71.68
120MB A300/A400 interface included	£100	£117.50
500MB A3000/A3010 interface included	£128	£150.40
500MB A3020 fitting kit included	£89	£111.63
500MB A300/A400 interface included	£134	£157.45
210MB 3.5" IDE for A4000 & A5000	£45	£52.88
500MB 3.5" IDE for A4000 & A5000	£55	£64.63
1.2GB 3.5" IDE for RiscPC & A7000/+	£59	£69.33
2GB 3.5" IDE for RiscPC & A7000/+	£85	£99.88
4GB 3.5" IDE for RiscPC & A7000/+	£105	£128.08
100MB 3.5" SCSI	£39	£45.83
500MB 3.5" SCSI	£59	£69.33
2GB 3.5" SCSI	£115	£135.13
3GB 3.5" SCSI	£139	£163.33
4GB 3.5" SCSI	£159	£186.83
6GB 3.5" SCSI	£239	£280.83

EXTERNAL SCSI CASES

for hard drives CD drives & removeable drives
FREE headphones and data cable worth over £20

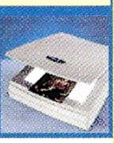


The unique Combo Case - takes any two SCSI devices & gets rid of all those cables, mains leads etc. Accepts any 5.25" unit.

Acorn M E U 2x CD + free 5.25" slot	£69	£81.08
Case for single SCSI device	£40	£47.00
Combo case for 2 SCSI devices	£60	£70.50

SCANNERS

inc FREE software worth £49



The new ultra-slim ScanExpress 36-bit colour scanner has a compact footprint, fast scanning speeds and quiet operation. Free ImageMaster software and TWAIN driver. Free PC interface/software kit (SCSI only). Optional transparency adaptor available.

ScanExpress 6000 parallel	£99	£116.33
ScanExpress 12000 parallel	£119	£139.83
ScanExpress 6000 SCSI	£119	£139.83
ScanExpress 12000 SCSI	£169	£198.58
Scanflat 1200 pro SCSI	£399	£468.83
ImageMaster & Twain	£49	£57.58
Scanflat transparency kit - slides etc	£149	£175.08
ScanExpress transparency kit-slides etc	£75	£116.33
CanoScan 2700F film scanner	£499	£586.33

FIXING KITS, CABLES etc

Podule case for A3000	£16	£18.80
Fixing kits for hard drives	£8	£9.40
A4 IDE hard drive fixing kit	£12	£14.10
A300 series backplane (4 way 4 layer)	£48	£56.40
A7000/+ 1 slot backplane (not with CD)	£34	£39.95
Risc PC 2 slot backplane	£30	£35.25
2nd slice for Risc PC inc 105watt PSU	£99	£116.33
2nd slice for Risc PC	£76	£89.30
SCSI I & II cables choice from	£10	£11.75
SCSI/IDE ribbon cables from	£5	£5.88
SCSI terminator/adaptors (selection)	£10	£11.75
Monitor cable for all Acorn (selection)	£10	£11.75

XTRA HARD DRIVES

Guaranteed 4MB+/sec read transfer rate with Castle Storm DMA32 SCSI card

4GB XTRA 3.5" SCSI	£259	£304.33
6GB XTRA 3.5" SCSI	£339	£398.33
8GB XTRA 3.5" SCSI	£429	£504.08
18GB XTRA 3.5" SCSI	£899	£1056.33

VIDEO HARD DRIVES

Fastest on market - externally boxed and ideal for Video use - StormPCI or Storm DMA32 card recommended

4GB Video SCSI external	£449	£527.58
9GB Video SCSI external	£649	£762.58
18GB Video SCSI external	£1199	£1408.83

CD ROM DRIVES

inc FREE driver software & fixing kit worth £29

Castle Technology's range of CD ROM drives are chosen for their reliability, ease of use and robustness. They have fast access times, and include driver software. They are particularly suitable for multimedia applications.

4x speed SCSI CD ROM drive	£29	£34.08
8x speed SCSI CD ROM drive	£34	£39.95
32x speed SCSI CD ROM drive	£69	£81.08
24x speed IDE CD ROM drive	£45	£52.88
32x speed IDE CD ROM drive	£49	£57.58
40x speed IDE CD ROM drive	£69	£81.08
IDE CD driver for Risc PC & A7000	£25	£29.38
6x4x2 CD ReWriter inc !CDBurn	£325	£410.08
6x4x2 Ext CD ReWriter inc !CDBurn	£389	£457.08
6x2x2 CD ReWriter inc !CDBurn	£280	£316.08
6x2x2 Ext CD ReWriter inc !CDBurn	£340	£351.33
CD ROM fixing kit (data & audio cable)	£4	£4.70

CD TOWERS

7 SCSI CD towers with lockable doors

Add the Castle Technology CD Tower to your network and have simultaneous access to between 7 & 28 CD-ROMs. Enables CD resource discs to remain locked and untouched but accessible from all over the network. Up to 4 towers can be connected to one computer. Fully compatible with Access CD network software.

8x CD 7 drive Tower	£379	£468.83
32x CD 7 drive Tower	£579	£703.83

SPECIAL OFFER!

UP TO £500 OFF PHOEBE COMPUTER

(including VAT)

Offer expires 31/10/98

Phone NOW for full details

KEYBOARDS MICE ETC

Ergo keyboard for pre Risc PC	£69	£81.08
Ergo keyboard for Risc PC A7000/+ N/C	£39	£45.83
Keyboard for Risc PC A7000/+ N/C	£19	£22.33
Keyboard cable (6 way)	£10	£11.75
Mouse for all Acorns (not A7000 etc)	£12	£14.10
Mouse for A7000/+ N/C Phoebe	£15	£17.63
Mouse balls heavy (pack of 10)	£15	£17.63
Floppy drive any Acorn except A300 A4	£30	£35.25
Replacement floppy drive for A4	£79	£92.83

COMBOS

Full range available - free fitting in combo case when all purchased at the same time

8x CD & 100MB HD - external SCSI	£130	£152.75
8x CD & 500MB HD - external SCSI	£150	£176.25

REMOVABLE DRIVES

- free media with all drives

For flexible, expandable storage, the infinite capacity of a removable drive is perfect. All drives are the latest spec, and internal versions can be fitted into the CT Combo case. Data transfer rate up to 8.8MB/sec (Nomai).

ZIP drive internal 100MB SCSI	£99	£116.33
ZIP drive external 100MB SCSI	£99	£116.33
ZIP drive external parallel not A300 etc	£109	£128.08
Iomega Parallel ZIP driver (100MB)	£25	£29.38
Syquest Flyer 230MB SCSI external	£85	£99.88
MaxIT internal 500MB SCSI drive	£129	£151.58
Nomai internal 750MB SCSI drive	£165	£193.88
Nomai external 750MB SCSI drive	£215	£252.63
JAZ internal 1GB SCSI drive	£189	£222.08
JAZ external 1GB SCSI drive	£199	£257.33
SyJet internal 1.5GB SCSI drive	£219	£240.88
SyJet external 1.5GB SCSI drive	£255	£299.63
JAZ internal 2GB SCSI drive	£360	£423.00
JAZ external 2GB SCSI drive	£410	£481.75
PD 24x CD & 630MB optical SCSI drive	£299	£351.33

NEW NEW NEW!!

40-SPEED IDE CD-ROM DRIVE

The fastest CD-ROM drive available with super-fast access times giving the ultimate in performance.

Special price only

£59 £69.33 inc VAT

MEMORY

A300 & A400 1-4MB	£75	£88.13
A300 & A400 4-8MB	£119	£139.83
A3000 1-4MB	£55	£64.63
A3000 4-8MB	£149	£175.08
A3000 serial port upgrade	£25	£29.38
A3010 1-2MB	£25	£29.38
A3010 1-4MB	£59	£69.33
A3020 & A4000 2-4MB	£35	£41.13
A5000 2-4MB	£60	£57.58
A5000 4-8MB	£139	£175.08
Risc PC A7000/+ 16MB SIMM	£17	£21.15
Risc PC A7000/+ 32MB SIMM	£29	£29.38
Risc PC A7000/+ 64MB SIMM	£93	£109.28
Risc PC 2MB VRAM	£69	£69.33

PROCESSORS & RISC OS

StrongARM processor	£249	£292.58
Risc OS 3.11 chip set	£25	£34.08
Risc OS 3.11 manual set	£20	£23.50
Risc OS 3.11 hardware upgrade - A300	£20	£23.50
Risc OS 3.7 chip set	£50	£58.75
ARM 610 processor (2nd user)	£69	£81.08
ARM 3 processor for A3000 A300 A400	£99	£116.33

MODEM

56k external inc FREE online time	£89	£104.58

REMOVABLE MEDIA

Zip 100MB media	£8	£9.40
Zip 100MB media (6 pack)	£45	£52.88
Syquest 105MB media	£29	£34.08
Syquest 135MB media	£21	£14.10
Syquest 230MB media	£19	£18.80
Syquest 270MB media	£32	£37.60
MaxIT 500MB media	£29	£34.08
Nomai 750MB media	£38	£44.65
JAZ 1GB media	£58	£68.15
SyJet 1.5GB media	£55	£68.15
JAZ 2GB media	£79	£92.83
PD 630MB media	£18	£21.15
CD 630MB write once media (Pk of 10)	£12	£14.10
CD 630MB re-write media	£12	£14.10

COMPUTER SYSTEMS

£200 worth of FREE software

CT supply the full range of Acorn systems including the latest release – Phoebe. We offer special prices which include generous free software packages and the acclaimed Castle Technology technical support helpline.

A7000+ 14" 1GB 24xCD 8MB	£769	£938.83
RiscPC 14" 1GB 24xCD 22MB	£999	£1173.83
Storm RiscPC 14" 4GB 32xCD (fast)	£1299	£1526.33
Phoebe 2100 36MB 32xCD	£1499	£1761.33

COLOUR MONITORS

3 year warranty on all monitors (1 year on AKF18)

ACORN AKF18 14" - pre RiscPC	£99	£116.33
14" SVGA	£85	£111.63
15" digital SVGA	£99	£139.83
17" digital SVGA	£165	£198.58
15" digital SVGA Iiyama	£159	£186.83
17" digital SVGA Pro 0.25 Iiyama	£329	£386.58
21" digital SVGA Iiyama	£729	£856.58
14" colour LCD display (TFT Analogue)	£799	£938.83

INKJET PRINTERS

inc FREE data cable & Acorn driver WORTH £20

Advanced inkjet technology for bright colour images & fast printing times. Up to 720dpi resolution (near photographic quality). Supplied with Acorn drivers & data cables.

CANON BJC-80	£149	£175.08
CANON BJC-250	£84	£98.70
CANON BJC-4300	£105	£123.38
CANON BJC-4650	£227	£266.73
CANON BJC-620	£179	£210.33
EPSON Stylus colour 300	£109	£128.08
EPSON Stylus colour 400	£115	£139.83
EPSON Stylus colour 600	£149	£175.08
EPSON Stylus colour 800	£219	£257.33
Parallel printer cable	£10	£11.75
Turbo driver for above printers	£45	£52.88
Acorn printer driver for any listed printer	£10	£11.75
TCP/IP (LPR) postscript printer driver	£175	£205.63

SPECIALS

DOA warranty only

JP150 sheet feeder	£10	£11.75
Master 128 motherboard	£10	£11.75
German keyboards RiscPC/A7000 etc	£10	£11.75
A5000 Power Supply Unit	£15	£17.63
SJ Econet Bridge	£20	£23.50
Acorn Econet interface	£5	£5.88
SJ Econet starter kit	£20	£23.50
PC card for A3000 A3010 A3020 A4000	£99	£116.33
Startwrite wordprocessor	£5	£5.8826-

DELIVERY CHARGES - Next day insured

Orders over £200 paid by debit card	FREE	FREE
Small items	£6	£7.05
All other orders	£11	£12.93
Fitting charge (inc collection)	£18	£21.15

We welcome payment by cheque (allow 5 days to clear), Credit and Debit cards.

EDUCATIONAL ORDERS WELCOMED.

CASTLE TECHNOLOGY, Ore Trading Estate
Woodbridge Road, Framlingham, Suffolk IP13 9LL
TEL: 01728 621222 FAX: 0800 783 9638

Sales lines open Monday to Friday 9.00am till 5.00pm
Saturday 10.00am till 1.00pm

Contact us by e-mail: sales@castle-technology.co.uk
Visit our web site! http://www.castle-technology.co.uk

All trademarks acknowledged.
E&OE.
All products carry a full 1 year warranty unless otherwise stated.

FREEFAX 0800 783 9638 PHONE 01728 621222 FREEFAX 0800 783 9638 PHONE 01728 621222

CONTENTS

November 1998

• regulars

6 **News**
Five pages of up-to-the-minute news

14 **Public Domain**
The latest PD news

17 **Comms**
Weather warnings on the Net

19 **Graphics**
Photodesk 3 uncovered

21 **PC page**
The arrival of *PCPro 3.0*

Acorn WORLD

For all you need to know about this year's show – Turn to page 53

Managing Editor Pam Turnbull
Editor Steve Turnbull
Deputy Editor Karen Peach
Art Editor Ed Burke
Sub Editor Justine Moran
Editorial Assistant Stephen Scott

Contributors
Dave Acton, Mike Buckingham, Ian Burley, Nobilangelo Ceramalus, Mike Cook, David Dade, Dave Lawrence, Alisdair McDiarmid, Steve Mumford, Max Palmer, John Pettigrew, Jill Regan, Paul Skirrow, Neil Spellings, Mark Taylor, Paul Wheatley

Account Manager Ian Antrobus
Ad Production Barbara Newall
Ad Typesetting Malcolm Thorley
Marketing Assistant Jane Comber
Production Manager Alan Capper
Circulation Director David Wren
Distribution COMAG (01895) 444055
Assistant Publisher Elaine Prescott
Managing Director Ian Bloomfield

Subscriptions & Back Issues
Database Direct 0870 606 0423
E-mail: dbscot@globalnet.co.uk
13 issue subscription rate: £39.99 (UK), £53.99 (EU), £68.99 (World)

Member of the Audit Bureau of Circulation.

Acorn User is an independent publication and Acorn is not responsible for any of the articles in this issue or for any of the opinions expressed.

IDG MEDIA
Global Vision Total Knowledge

IDG Media, publishers of PC Home, PC Advisor, Windows Expert, Playstation Pro, PC Basics, PC Games Solutions, PlayStation Zone, N64Pro, Acorn User and Mac World.

IDG worldwide informs more people about information technology than any other company and is the leading global provider of IT services, publishing over 285 computer publications in 75 countries, 500 book titles and exhibitions including E3, Plus research from International Data Corporation.

Published by IDG Media Ltd,
Media House, Adlington Park, Macclesfield SK10 4NP
e-mail aueditor@idg.co.uk
http://www.acornuser.com/
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Apple Web Offset, Warrington

©1998 IDG Media Ltd.
No material may be reproduced in whole or in part without written permission. While every care is taken, the publishers cannot be held legally responsibie for any errors in articles, listings or advertisements and the views of contributors do not necessarily reflect the views of the publishers

23 **CD pages**
Details of our fantastic cover CD-ROM

71 **Game show**
All the latest plus *Abuse* reviewed

99 **Letters**
Tell us how you feel about all things Acorn

106 **The Regan Files**
We talk to the elusive David Pilling

• hands on

83 ***INFO**
More mind-blowing stuff

90 **Run the Risc**
On the receiving end

93 **C for yourself**
Selecting fonts and choosing colours

96 **Rambles through Acorn Wood**
Mike Cook tramples more Acorn-related ground

SAVE 25% ON ANGLIA'S ANCIENT GREEKS CD-ROM
Turn to page 101

• education

77 **Editorial**
Get up-to-date on educational matters

79 **Numberlines**
Round-up of maths packages

80 **Minding your Ps and Qs**
Make learning the ABC fun

81 **Free for all**
Interesting and useful websites

SPECIAL OFFER
!CDBlaze
from
Cumana at fantastic prices –
Turn to page 92
to find out more

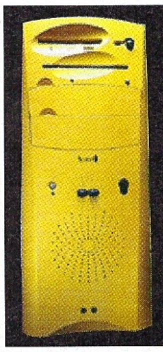
• reviews

42 **Pretty Good Privacy**
Security on the Internet explained

45 **Burn it up**
CD writing on Acorn machines

• features

24 **State of the art**
Phoebe and its rivals



COMPETITION
YOUR CHANCE TO WIN A PHOEBE RISC PC II
See how to enter on page 31

32 **Building utopia**
Explore the power of *DaVinci*

38 **Relatively speaking**
Relational databases – part 2

61 **The winning cards**
Acorns in business in NZ

64 **Members only**
The latest from the AAUG

67 **History of Acorn User**
We look back over the last 16 years

SUBSCRIPTION OFFERS
Take advantage of our fantastic offers – See page 102

The Acorn User **website**
Check it out at:
http://www.acornuser.com/

Next month in **Acorn User**
We review Photodesk 3 the new brilliant version of the bitmap package – plus more on relational databases and all the regulars
Next issue on sale 29 October 1998

CTA DIRECT

SEE US AT ACORN WORLD STAND 105

Curriculum Training Associates
Dept. AU09, 168 Elliott St.
Tyldesley
12Gtr Manchester
M29 8DS

EMAIL: sales@cta.u-net.com http://www.cta.u-net.com **Tel - 01942 511000** Fax - 01942 749325

PHOEBE (CTA Enhanced) SA233, 128MB, 8.4Gb Hd, 32xCD

(£1495 + vat) & Save upto £500.00 off R.R.P. Call for details

Phoebe RISC PC 2

Promotions

☆Reserve yours for only £100 inc.
☆Save upto £500 off RRP
☆0% Deposit 0% Interest (6 months)
☆CTA Enhanced Version
(machine specification may improve).

Base unit only (no monitor)	£1495.00 + VAT
As above with 17" monitor	£1645.00 + VAT

233Mhz RiscPC Offers
0% deposit DEAL NOW ON

e.g. RPC SA 2M+32Mb/2.1G/32x CD & 17" monitor for only **£1125 + VAT**

RPC SA base models from **£854** inc VAT
AND we will match or beat your best offer.

A7000 System Specials

A7000 8Mb /net base	£429+ vat
A7000 8Mb /1.7G Hd base	£449+ vat
A7000 8Mb /net/14" mon	£529+ vat
A7000 8Mb /1.7G/14" mon	£529+ vat
A7000 8Mb /net/Hd/14"mon	£579+ vat

A7000+ System Offers

A7000 +16M / 1.7G / 16xCD /15" mon & Stereo Spk for only £799 ex. VAT

RiscPC PC Cards

	With RiscPC or Separately
DX2-66	**£149.00 inc VAT**
DX4-100	£233.99 inc VAT
586-100 (Acorn)	£350.99 inc VAT
586-133 (CJE 512)	**£350.00 inc VAT**

MONITORS **Sale now on**

	Ex. VAT	Inc. VAT
14" SVGA 0.28 (3yr on-site)	£89.00	£104.58
15" SVGA 0.28 (**Special**)	£100.00	£117.50
15" SVGA 0.28 (3yr on-site)	£119.00	£139.83
15" SVGA 0.28 Multi-Media	£139.00	£163.33
17" SVGA Home Multimedia	**£165.00**	**£193.88**
17" SVGA 0.28 (3yr on-site)	**£200.00**	**£235.00**
17" SVGA 0.25 (3yr on-site)	**£300.00**	**£352.50**
17" Multisync (17" AKF50)	**£300.00**	**£352.50**
17" Iiyama Pro	£340.00	£399.50
19" SVGA 0.26 (3yr on-site)	**£400.00**	**£470.00**
20" SVGA 0.28 (Special)	**£300.00**	**£352.50**
21" SVGA 0.25 (3yr on-site)	**£595.00**	**£699.13**
21" Iiyama Pro (A101GT)	£799.00	£938.83
21" Iiyama Pro (A102GT)	£870.00	£1022.00
AKF18/2 Multisync	£115.00	£135.13
AKF53 Multisync (14")	£165.00	£193.88
AKF50 Multi-sync (14")	**£199.00**	**£233.83**
Multisync A300/3000 cable	£8.50	£9.99

THE BEST! PRINTER PRICES

(Please ring for latest prices)		Ex. VAT	Inc. VAT
Canon BJC80W portable col.		£159.00	£186.83
Canon BJC 250 **colour**	A4	£84.00	£98.70
Canon BJC 4300 colour	**A4**	**£110.00**	**£129.25**
Canon BJC 4650 colour	**A3**	**£227.00**	**£266.73**
Canon BJC 7000	**A3**	**£205.00**	**£240.88**
Photo drivers for 4200/4550		**£58.72**	**£69.00**
Epson Stylus 400 colour	A4	£100.00	£117.50
Epson Stylus 600 Colour	**A4**	**£135.00**	**£158.63**
Epson Stylus 850 Colour	A4	£230.00	£270.25
Epson Stylus 1520 Colour	A3	£499.00	£563.87
Epson Stylus Photo 700	A4	£180.00	£211.50
Epson Stylus Photo EX	A3	£330.00	£387.75
HP 400 L **Special**	**A4**	**£76.00**	**£89.30**
HP 670C Colour	A4	£107.00	£139.83
HP 690C Colour PLUS	A4	£136.00	£159.80
HP 890C Colour	A4	£217.00	£254.98
HP LASERJET 6L		**£249.00**	**£292.58**
HP LASERJET 6P		£494.00	£580.45

IDE HARD DRIVES AND SUB-SYSTEMS *WHY PAY MORE???*

A3000/A3010 Hard drives

	Ex. VAT	Inc. VAT
Internal 60/85 Mb	£ 99	£116.33
Internal 170 Mb	£109	£128.08
Internal 340 Mb	£129	£151.58
Internal 512 Mb	£139	£163.33
Internal 850 Mb	**£149**	**£175.08**
Internal 1 Gb	£159	£186.83
Internal 2 Gb	£169	£198.58
Internal 3 Gb	**£179**	**£210.33**

External A3000 add £20.00 +VAT
includes CD ROM interface

A3020 Hard drives

		Ex. VAT	Inc. VAT
85Mb		£49	£57.58
170Mb		£59	£69.33
340Mb		£79	£92.83
512Mb		**£89**	**£104.58**
850 Mb	*	£149	£175.08
1 Gb	*	£159	£186.83
2 Gb	*	£169	£198.58
3 Gb	*	**£179**	**£210.33**

* includes CD ROM interface For partioning software only deduct £25.00 + vat (29.38)

A4000/A5000/A400

		Ex.VAT	Inc. VAT
420Mb	*	**£76**	**£89.30**
540Mb	*	**£85**	**£99.88**
700Mb	*	**£93**	**£109.28**
1.2Gb	*	**£115**	**£135.13**
2.1Gb	*	**£125**	**£146.88**
3.2Gb	*	£135	£158.63
4.0Gb	*	**£145**	**£170.38**

* inc. internal removable HD & CD ROM i/f
For partioning software only deduct £25.00 + vat (29.38)

RPC 1&2/A7000

	Ex. VAT	Inc. VAT
512Mb	**£65**	**£76.38**
1.2Gb	**£70**	**£82.25**
1.7Gb	£75	£88.13
2.1Gb	**£80**	**£94.00**
3.2Gb	£90	£105.75
4.3Gb	**£100**	**£117.50**
6.4Gb	**£115**	**£135.13**
8.4Gb	**£145**	**£170.38**
9.1 Gb	**£200**	**£235.00**
12G 5.25	**£220**	**£258.50**

CD-ROMS

	IDE internal	IDE external	SCSI internal	SCSI external
32 x	£49.00 (£57.58)	£99.00 (£116.33)	£75.00 (£88.13)	£125.00 (£146.88)
24 x	£45.00 (£52.88)	£95.00 (£111.63)	£70.00 (£82.25)	£120.00 (£141.00)
16 x	£39.00 (£45.83)	£89.00 (£104.58)	£45.00 (£52.88)	£95.00 (£111.63)
12 x	£39.00 (£45.83)	£89.00 (£104.58)	£40.00 (£47.00)	£90.00 (£105.75)
8 x	£34.00 (£39.95)	£84.26 (£99.00)	£30.00 (£35.25)	£84.26 (£99.00)

EXTERNAL IDE REQUIRE SUITABLE I/F (3.5 driver £15+ vat) IDE int. fitting kit £5 inc.

EXT SCSI includes SCSI I cable, SCSI II cable £5 (£5.87) extra. SCSI fitting kits from £10 + vat

SCSI HARD DRIVES

540M (limited Stock)	£70.00	(£82.25)
1.0Gb (New Stock)	£80.00	(£94.00)
2Gb (limited Stock)	£115.00	(£135.13)
2Gb (7200rpm)	£130.00	(£152.75)
4.3Gb (5400 or 7200rpm)	£160.00	(£188.00)
4.3Gb (10,000rpm)	£255.00	(£299.63)
9.1Gb (7200rpm)	£310.00	(£364.25)
9.1Gb 10,000rpm	£575.00	(£675.63)

REMOVABLE HARD DRIVES

Panasonic PD / CD-ROM from £139.00 + Vat

	IDE internal	IDE external	SCSI internal	SCSI external	Parallel PC /Mac	Parallel ACORN
Zip 100	£69.00 (£81.08)	£129.00 (£151.58)	£100.00 (£117.50)	£100.00 (£117.50)	£100.00 (£117.50)	£115.00 (£135.13)
Ezflyer 230					£80.00 (£94.00)	£130.00 (£152.75)
Nomai 750			£165.00 (£193.88)	£215.00 (£252.63)		
Jaz 1Gb			£189.00 (£222.08)	£199.00 (£233.83)	£224.00 (£263.20)	£249.00 (£292.58)
Syjet 1.5G	£219.00 (£257.33)	£269.00 (£316.08)	£219.00 (£257.33)	£269.00 (£316.08)	£279.00 (£327.83)	£279.00 (£327.83)
Jaz 2Gb			£265.00 (£311.38)	£265.00 (£311.38)	£294.00 (£345.45)	£324.00 (£380.70)

** REMOVABLE IDE REQUIRE SUITABLE INTERFACE . EXTERNAL SCSI INCLUDE SCSI 1 CABLE , SCSI II CABLE £5.00 +VAT EXTRA

Removable Drive Media

	Ex. VAT	Inc.VAT
100mb Zip	£8.45	£9.93
Zip 5 pack	£38.30	£45.00
120mb LS120	£7.50	£8.81
135 Syquest	£21.00	£24.68
230 Syquest	£19.90	£23.38
270 Syquest	£29.75	£34.96
650Mb Pan. PD	£19.00	£22.33
750Mb Nomai	£38.00	£44.65

	Ex. VAT	Inc.VAT
1Gb Jazz	£58.00	£68.15
1.5Gb Syquest	£58.00	£68.15
CDR CD-ROM	£1.28	£1.50
CDR 10 pack	£10.00	£11.75
CDR 25 pack	£21.28	£25.00
CDR/W CDROM	£12.00	£14.10
CDR/W 10 pack	£100.00	£117.50

Interface Adapters

Storm SCSI 8 bit (A30x0 int)	£88.00	£103.40
Storm SCSI 16 bit (podule)	£96.00	£112.80
Storm SCSI 32 bit (podule)	£128.00	£150.40
Powertec SCSI3 32 bit (Pod)	£155.00	£182.13
Simtec 8 bit (A3000/A3010)	£55.00	£64.63
Simtec 16 bit (AX00/A5000/RPC)	£45.00	£52.88
APDL (ICS)16 bit DMA	£46.81	£55.00
RapIDE32	£119.00	£139.83

Removable IDE or SCSI Housing Unit £20.00 (£23.50)

COLOUR SCSI SCANNERS

P'llel A4 600dpi inc Acorn s/w	**£99.00**	**(£116.33)**
Mustek A4 600 dpi inc Acorn s/w	**£119.00**	**(£139.83)**
Mustek *A4 1200 dpi* inc Acorn s/w	***£169.00***	***(£198.58)***
Imagemaster & Twain for above	£49.00	(£57.58)
Epson p'llel A4 600dpi inc Acorn s/w	**£170.00**	**(£199.75)**
Epson SCSI A4 600dpi inc Acorn s/w	**£229.00**	**(£269.08)**

6 Drive CD-ROM SCSI Towers

8x £299.00 exc.
16x £399.00 exc.
32x £549.00 exc.

StrongARM Special Offer

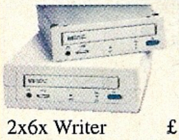
£259.00 inc VAT
(with any Hard Drive / Memory purchase)

FLOPPY DISKS @20p !!

	Ex. VAT	Inc.VAT
DD Re-label Acorn fmt 10 pk	£2.00	£2.35
DD Re-label Acorn fmt 100 pk	£17.02	£20.00
DD Branded box10 pack	£2.50	£2.94
DD Branded box 10x	£21.28	£25.00
HD bulk Acorn or PC 10 pack	£2.00	£2.35
HD bulk Acorn or PC 100 pack	£17.02	£20.00
HD Branded 10 pack	£3.50	£4.11
20 cap Disk Box	**£1.69**	**£2.00**
40 cap Disk Box	**£2.54**	**£2.98**
100 cap Disk Box	**£2.98**	**£3.50**
3.5" Floppy head cleaners	**£2.50**	**£2.94**
CD-ROM lens cleaner	**£4.25**	**£4.99**

Printer Ribbons, Inkjet Cartridges, New/Recycled Laser Toner Carts
Prices available on request

CD-ROM WRITERS



Prices Start from £185.00 +

2x6x Writer	£185.00	(£217.37)
2x2x6x Re-Writer	£230.00	(£270.25)
4x2x6x Re-Writer	£275.00	(£323.13)
CD-BURN for above	**£50.00**	**£58.75**

POWERED SPEAKERS

	Ex. VAT	Inc. VAT
60 watts with PSU	£16.98	£19.95
240 watts with PSU	**£24.68**	**£29.00**
Subwoofer system with PSU	£42.00	£49.35
Comms System Mic/Headphones	£8.50	£9.99

Digital Cameras

	Ex VAT	Inc VAT
QV11a (PC Software)	£170	£199.75
QV11a (Acorn SW)	£260	£305.50
Qv11a/Qv100 s/w kit	£96	£112.80

Casio QV100a Digital Camera

PC s/w only £212.00 exc vat (£249.10)
Acorn & PC s/w £297.00 exc (£348.98)

We can repair/upgrade your machine(s) and monitors at competitive prices please ask
All Acorn's including BBCs & PCs

3 yr Warranty on ALL Acorn MEMORY *why Pay More??*

ACORN MEMORY NEW PRICES

		Ex. VAT	Inc. VAT
4-8 MB Up. (A310,440,3000*)	⇓	£99	£116.33
4-8 MB Up. (A5000*)	⇓	£119	£139.83
*rework for A3000/5000/25mhz		£25	£29.38
A3010 1-2 MB Upgrade	⇓	£25	£29.38
A3010 2-4 MB Upgrade (exch)	⇓	£45	£52.88
A3010 1-4 MB Upgrade	⇓	£55	£64.63
A3020/4000 2-4 MB Upgrade	⇓	£40	£47.00
A5000 2-4 MB Upgrade	⇓	£45	£52.88
A3000 1-2 MB Non-Upgrade		£20	£23.50
A3000 2-4 upgrade (exchange)	⇓	£45	£52.88
A3000 1-4 MB Upgrade	⇓	£55	£64.63
A3000 Serial Port Upgrade		£23	£27.03
A310 4Mb Upgrade	⇓	£50	£58.75
A400/1 1Mb Upgrade per meg	⇓	£25	£29.38
Risc OS Carrier Board (A310)		£19	£22.33
MEMC 1A upg (short supply)		£45	£52.88
NEW A540 4Mb	⇓	£97	£113.98

RISC PC MEMORY

Also FOR A7000	Ex. VAT	Inc. VAT
8Mb SIMM	£10.00	£11.75
16Mb SIMM	£17.00	£19.98
32Mb SIMM	**£29.00**	**£34.08**
32Mb High Clearance	**£39.00**	**£45.83**
64Mb SIMM	**£100.00**	**£117.50**
128Mb SIMM	**£212.00**	**£249.10**
1Mb VRAM	£38.30	£45.00
2Mb VRAM	**£76.00**	**£89.30**
1-2 Mb (exchange)	£66.00	£77.55

PHOEBE MEMORY

32Mb SDRAM	**£29.00**	**£34.08**
64Mb SDRAM	**£65.00**	**£76.38**
128Mb SDRAM	**£120.00**	**£141.00**

30/33 Mhz Arm 3 upgrade

with FPA socket	**⇓£115.00 inc**
with FPA 10 fitted(25Mhz)	**£165.00 inc**

NETWORKING

ETHERNET INTERFACES

All ethernet i/fs etc are ANT	Ex. VAT	Inc. VAT
A3000 int 10base2 or T , Access+	£89.00	£104.58
A400 / A5000 10base2 or T Acc+	£89.00	£104.58
A400 / A5000 10base2 & T Acc+	£99.00	£116.33
A3020 10base2 Access+/ext MAU	£99.00	£116.33
A3020 10baseT Access+/ext MAU	£99.00	£116.33
RiscPC/A7000 10base2 or T Acc+	£89.00	£104.58
RiscPC/A7000 10base2 & T Acc+	£99.00	£116.33

Cables

2M	£4	£5.29
3M	£6	£7.05
5M	£7	£8.23
10M	£11	£12.93
20M	£15	£17.63

State 10base2 or 10baseT

Premier Quality Ink Refills

Single refills	(1x22ml)	£6.00 inc
Twin refills	(2x22ml)	£10.00 inc
Triple refills	(3x22ml)	£14.00 inc
Tri- Colour	(C,M.Y)	£15.00 inc
Quad-Colour	(C,M.Y.K)	£20.00 inc
125 ml		£21.00 inc
250ml		£38.00 inc
500ml		£50.00 inc
1 litre		£70.00 inc

All sizes available in C,M,Y,K

Desktop FAX MODEMS

33600 Voice BABT approved	£40.00	**£47**
55600 x2 /V90 3Com USR	£118.30	**£129**
55600 Flex (Rockwell)	**£58.72**	**£69**
ISDN modem (external)	**£169.36**	**£169**
High speed serial cards from	£78.30	**£92**

ArcFAX £31 inc , Ant Inet £110.51 inc

Alternative PC Bases

Pentium from ONLY £249.00 + VAT

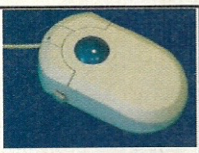
MICE & KEYBOARDS

	Ex. VAT	Inc. VAT
Acorn Trackball/Mouse *NEW*	**£29.79**	**£35.00**
Acorn Original Mouse	£25.00	£29.38
Acorn Replacement Mouse	£12.00	£14.10
Acorn **ERGO** Mouse *NEW*	£12.00	£14.10
A7000 Logitec Mouse	**£15.00**	**£17.62**
A7000 Ergo Mouse	**£15.00**	**£17.62**
Ergo (std) RiscPC Keyboard	**£21.28**	**£25.00**
Ergo curved RiscPC K/board	**£29.79**	**£35.00**
A400/A5000 replacement k/brd	£69.00	£81.08

ARCSHARE Acorn networking for PCs £29.95 exc Vat £35.19 inc Vat see network section for Cards ETC.

NEW DEALS

ACORN TRACKBALL & MOUSE £29.79 + VAT



High Quality Acorn ERGO mouse £12.00 + VAT

Replacement Floppies

A3000/400/500 floppy £29.00+vat (£34.08)

A30X0/4000/5000 floppy allows cross -formatting of HD and DD discs £29.00+vat (£34.08)

RiscOS 3.11 upgrades

£25.00 exc Vat (£29.38)

RESURRECTION
QUAKE

Quake £33.00

SYNDICATE

For all 8Mb machines

Only £27.00 INC VAT

DOOM TRILOGY

£32.50 Inc. **FREE** Doom Secrets book.

THE BARGAIN BASEMENT

(All Prices below include VAT)

Most Items will be at Acorn World

Acorn Software Bin

10/10 Dinosaurs	£11.75
A3010 Joystick Controller Software	£15.00
Acorn Pocket Book..Schedule	£10.00
Acorn Pocket Book..A-link Upgrade ????	£10.00
Alone in the Dark	£29.00
Aries (4 game pack)	£20.00
Arm Tech Labeller	£9.00
Beebug Hard Drive Companion	£5.00
Birds of War	£20.00
Boxing Manager	£8.00
Christmas Clipart SG010	£10.00
ColourSep (Colour Seperation Software)	£8.00
Creater 2	£25.00
D'File Font Pack (Academy)	£10.00
D'File Font Pack (Balmoral)	£10.00
D'File Font Pack (Commercial Script	£10.00
D'File Font Pack (FreeStyle Script)	£10.00
D'File Font Pack (Manhattan)	£10.00
D'File Font Pack (Mastercard)	£10.00
D'File Font Pack (Old Towne 536)	£12.00
DeskEdit	£10.00
Desktop Database	£15.00
DeskTop Thesaurus	£14.00
Diary +	£9.00
Drifter	£30.00
Easi Word	£8.00
EasyFont3	£24.00
FIRE and ICE	**£15.00**
Font Pack 1 (2 Disc Set)	£10.00
Font Pack 2 (2 Disc Set)	£10.00
FRAK (for RPC and A7000) NEW	£14.00
Galactic Dan	£10.00
Game ON (for RPC)	£15.00
Global Effect	£25.00
Guile	£10.00
HERO QUEST	**£15.00**
Imagery Art Package	£25.00
Impression Borders Discs 80 Chinese	£10.00
Impression Borders Discs 80 Old Engl.	£10.00
Jahangir Khan Squash	£8.00
KV (Platform Game)	£8.00
My World Support Disc Ancient Egypt	£12.00
My World Support Disc Ancient Greece	£13.00
Nuclides II and Elements II	**£25.00**
Quest for GOLD	**£8.00**
Revelation 2	£29.00
SilverBall	£10.00
Start Write	**£8.00**
StrongGuard	**£25.00**
Swiv (Budget Title)	£9.00
Visual Backup	£18.00
World Class Leaderboard (GOLF)	£10.00
Zool (on HD)	£10.00

Acorn CD-ROM Software

Acorn Replay CD (back in Stock)	£5.00
D'File PDCD 1,2,3 or 4	£5.00
D'File PDCD 5	£10.00
Hutchinson Encyclopedia	£39.00
Image warehouse	£20.00
TopicArt CD	**£10.00**
YITM Electricity and magnetism	**£15.00**
YITM Elements	**£15.00**
YITM Materials	**£15.00**
YITM (all three titles)	£35.00

1/2 price (or less) Book Bargains

Dabhand Guide "Buget DTP"	£3.00
Dabhand Guide "C" ver 3	£8.50
Dabhand Guide "C" ver 2	£3.00
Dabhand "Graphics on the ARM	£7.50
Dabhand Guide "Impression"	£7.50

2nd User Acorn Software

Compression	£6.00
Hearsay II	£15.00

More to be listed

Various Hardware bargains

A3000 bases from	**£85**	**£99.88***
A3010 bases from	**£100**	**£117.50***
A5000 Units Various	**POA**	**POA**
Monitors Various	**POA**	**POA**
Panasonic PD scsi system int	£139.00	£163.33
Panasonic PD scsi system ext	£199.00	£233.83
Pioneer SCSI 4x 6x stack ext	£169.00	£198.58
Syquest 1.5G p'll port PC only	£169.00	£198.58
Syquest 230 EZflyer (parallel)	£85.00	£99.88

new items 12 months wty *2nd user 90 days wty

Oddments

Mouse pads from	**£0.85**	**£1.00**
STAR LC10/20/100 colour ribbon	**£5.00**	

PC Utilities & Languages (on CD ROM	(inc vat)
Incontext Web Analyer	£10.00
Incontext Web Spider	£10.00
LOTUS SMARTSUITE 97 FOR WIN 95	£25.00
MICROGRAFIX DESIGNER	£25.00
MS WORKS V2.0 (Win 3.1 or 95)	£10.00
MS WORKS V4.0	£25.00
Photo Album maker	£10.00
Photo Calendar maker	£10.00
TURBO CAD	£15.00

PC CD Business Tiltles

COREL DRAW V4.0 CD	£20.00
DATA CAD V5.0	£20.00
Professor WINDOWS 95 (TUTOR)	£10.00

CD Education / Multimedia/ Kids Titles for PC

3D Body adventure	£10.00
FUN SCHOOL 5 (dreamland)	£10.00
FUN SCHOOL young scientist	£10.00
GLOBAL FRENCH	£10.00
GCSE maths 97/98 curriculum	£15.00
KIDS CAD	£10.00
Kids Zoo & 3D Dinasaurs	**£10.00**
MATHS BY COLOURS	£10.00
MS FINE ARTIST	£10.00
SHOW & TELL (inc. free calculator)	£15.00

CD Multimedia /Reference Titles for PC

3D Garden Designer		£15.00
Androute Routerfinder for UK		£10.00
Atlas of Great Britain (Ordinance Survey)		£15.00
HOME GARDNER CD		£10.00
MS BASKET BALL		£10.00
MS BOOKSHELF 94		£8.00
MS CINEMANIA 94		£8.00
MS CINEMANIA 95		£10.00
MS DANGEROUS CREATURES		£15.00
MS ENCARTA 96 OEM		£15.00
MS Encarta 98 Encyclopedia	**£35.00**	**£41.13**
MS JULIA CHILDS HOME COOKING		£10.00
MS MUSIC CENTRAL		£10.00
MS Magic School Bus		£15.00
ROUTE 66 (UK and Ireland)		**£15.00**
VISIONS OF MARS CD		£10.00

CD Anglia Multimedia **Reduced to clear**

Nelson and his Navy	**£15.00**
Romans	**£15.00**
Understanding the Body	**£15.00**

CD General Resource Titles	Ex. VAT Inc. VAT
35,000 Clip Art (WMF)	£20.00
75,000 Clip Art (WMF) & images	£25.00
COREL ARTSHOW 4	£10.00

Alone in the dark	£10.00
Angel Devoid (4 cd MEGA game)	£15.00
DOOM II SECRETS book	£10.00
EA COMPILATION CD (10 GAMES)	£10.00
HERETIC (shadow of the serpent riders)	£10.00
LITTLE BIG ADVENTURE	£10.00
LOOM	£10.00
MAGIC CARPET	£10.00
MS GOLF V2	£15.00
MS HIVE	£10.00
NASCAR RACING	£10.00
RAC Rally	**£12.00**
REBEL ASSAULT (Star Wars)	£10.00
SLIPSTREAM 5000	£10.00
STELLAR 7 CD	£10.00
THEME PARK	£10.00

PC CD-ROMS Buy 2 get one free

20th Century Almanac	£5.00
Busy Town, triple title	£5.00
Critical Path (interative game)	£5.00
Dragon Lore (2 cd games)	£5.00
GUS GOES TO CYBERTOWN	£5.00
HYPERBACKGAMMON	£5.00
Iron Helix	£5.00
MANTIS	£5.00
MARIOS EARLY YEARS	£5.00
MINERVA SHAREWARE	£5.00
NIGHT OWL 18 shareware	£5.00
Quantum Gate (Interactive Game)	£5.00
Quicken for Windows (personal Accounts)	£5.00
RAILROAD TYCOON (Three games)	£5.00
San Diego Zoo , The Animals	£5.00
SOFTKEY ENCYCLOPEDIA	£5.00
Travel Companion	£5.00
U.S. Interactive Atlas	£5.00
WING COMMANDER II	£5.00
Windows 95 (Shareware CD)	£5.00
WORLD ATLAS V5.0	£5.00

PC CD-ROMS Buy 2 get one free

DUNE (the game of the film)	**£10.00**
F117A FLIGHT SIM/ Phantom of the Opera	£10.00
FIFA SOCCER	£10.00
FX FIGHTER	£10.00
KINGS QUEST VII CD	£10.00
Lord of the Rings	£10.00
MANTIS + Civilisation	£10.00
MS GOLF	£10.00
Read with Me 1& 2 / Memphis Maths	£10.00
SIM ISLE	**£10.00**
UNDERSEA ADV/ SPEED/ SPACE	£10.00

New list now Ready Please Ask For Full List

HOW TO ORDER

BY MAIL or PHONE: Cheques or P.O.s should be made payable to 'CTA DIRECT'.

CREDIT CARD / SWITCH please give name, address, tel. no, card no, expiry date, issue no. if any.

BY EMAIL: sales@cta.u-net.com

OFFICIAL ORDERS by MAIL or FAX

Carriage charges inc. ins. & packaging charged at cost

Small items (under 2Kg).........no more than £6 + vat

One box of items totalling upto 25kg.............£6 + vat

Computer systems......................................£12 + vat

All prices are correct going to press. E&OE

All goods are guaranteed but not supplied on approval

Under new management

Acorn User, the magazine we all know and love, is – as we went to press – undergoing a change of ownership via a management buy-out led by Steve Turnbull, who has been the magazine's editor since February 1996.

New ownership is just one aspect of the changes – *Acorn User* is aiming to be a leading light in the regeneration of the Acorn market. Steve's new company, Tau Press, is backed by two successful entrepreneurs, Piers Springthorpe and Aidan Carlson. The pair have a successful record in building up businesses, one example being AidanPiers Sports & Prestige Cars, which can now boast sales of £5 million a year since it was started only five years ago.

Piers, who will be *Acorn User*'s new marketing manager, is a long-time associate of Steve and is an experienced user of Acorn computers himself. Aidan will assume the role of sales director. Piers explains that his experience in advanced marketing and management techniques, which he and Aidan gained in the US, can be applied to the Acorn market with the promise of surprising success.

He explained: "We take a broader view on the responsibility of making Acorn machines better known. For example, there is the reliability factor – the fact that, unlike PCs, Acorns don't crash regularly. It's technologically sound and British too. We intend to work closely with Acorn and we'd like to become the mouthpiece of the Acorn market." He also added that the project will be a personal challenge for all involved. Piers says one of the primary tasks of the new company behind *Acorn User* is to track down as many possible early users of Acorn computers in order to reacquaint many with the magazine as well as to bring them up-to-date with what is happening in the Acorn world.

"What we have in mind is to increase readership allowing us to provide even more detailed reviews and features. To expand the Acorn market itself and increase brand awareness thus creating more Acorn users with more choice in software and hardware. This will in turn make it more viable for companies to convert/write software for RISC OS.

"We also want to work closely with Acorn to increase the value of Acorn machines to the business community - based on their reliability and hence their savings in man-hours - who remain largely uninformed of the fact that there is an alternative to the PC."

From a journalistic standpoint, Steve Turnbull signals that there will be minimal changes: "Apart from the loss of my excellent Deputy, Karen Peach, there will be no real difference that will be detectable to the readers. All the regular contributors remain, the articles will remain the same high standard plus the competitions and special offers will keep rolling in."

We asked Steve if there will be any immediate change to the look and feel of the magazine: "No. We feel it is vitally important not to make any unnecessary changes, the magazine is well liked as it is, and 'if it ain't broke don't fix it'. At least initially, the magazine layout will continue to be done on an Apple Mac. There are a couple of practical reasons for this: our new Art Editor needs time to get become confident with the capabilities of Acorn software and the current *Acorn User* page templates are all Apple Mac based. But the rest of the business will be running off Acorn machines."

Steve acknowledges the fast moving nature of the computer industry and while there won't be change for change's sake, improvements will be sought: "That said, we will certainly be looking into ways to make the magazine more appropriate to the changing face of computing. You will start to see the results of our research within the next couple of issues. The Acorn market is essentially a co-operative and we all need to pull together to make Acorn and Acorn software the success that we all know it deserves to be. Nobody is a bystander."

An important factor for any magazine is distribution. It is notoriously difficult for new magazines to get an essential WH Smiths distribution agreement. Although Tau Press is a new company, *Acorn User* is an established magazine and Steve says distribution through Smiths will continue as before: "Distribution will remain the same. The magazine will continue to be sold retail as it is important to the entire Acorn market that there is retail visibility. We certainly hope to expand the retail distribution."

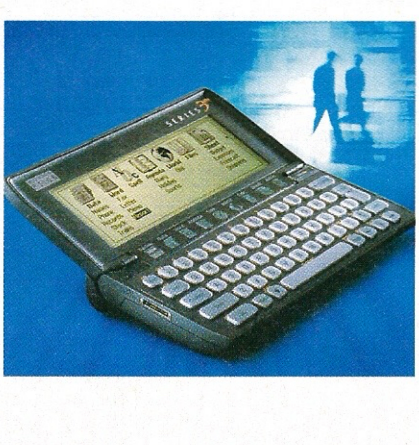
An area which has been due for an overhaul is the management of subscriptions: "We intend to take the handling of subscriptions in-house as soon as possible, this will allow us to deal with problems much faster. We believe we can speed up overseas subscriptions dramatically," says Steve.

Tau Press is not just about *Acorn User*, explains Steve: "This management buy-out of *Acorn User* is only the beginning for the new company. We have big plans for *Acorn User* and other new publications. And every one we produce will receive the full weight of our experienced marketing team. Success is the only option."

Xemplar to adopt new Series 3mx

Psion have announced an improved Series 3 pocket computer, the 3mx. And Xemplar, the Acorn/Apple joint venture educational computing supplier, have confirmed that they will be adopting it as a Pocket Book 3mx. Just when you thought Psion's new Series 5 wonder would sound the death knell for the Series 3 workhorse, Psion have actually released a faster improved model.

The new mx has a faster 27.7MHz NEC V30mx processor, accelerating the speed of applications typically by three times. 2Mb of memory is standard, which is equivalent to 50 pages of text, or several minutes of recorded sound. Like the 3c, which it effectively replaces, the 480x160 pixel screen is back-lit. Battery life from the standard 2x AA alkaline penlight cells is said to be virtually unchanged, meaning most users won't need new batteries more than about once every two months. The 3mx now comes with an updated version of *PsiWin 2*, the file exchange and diary/database synchronisation package.



The extra speed of the processor will be a boon to communications facilities of the 3mx. The Series 3 Internet browser was severely hampered by a lack of horsepower from the host hardware, but the mx promises a much better Internet experience.

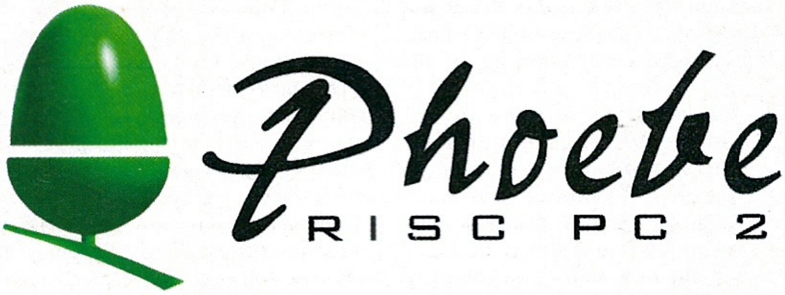
The mx is priced £269.95 and includes a £49.95 voucher for additional software. Xemplar's version will, we are told, appear some time in October and will feature a strikingly different case finish — metallic silver. The Series 5 is still the choice for power users, but the increased speed of the old Series 3 will certainly make life a lot easier for its users.

Psion, tel: 0990-143050, WWW: http://www.psion.com

Final touches applied before blast-off

Chris Cox, head of Acorn's Workstations division, has revealed some late-breaking changes to the marketing of the Risc PC replacement, including a revised name and an interesting marketing carrot to stimulate both The Clan and advanced orders for the new machine.

The official name of 'Phoebe 2100' was recently chosen after a Clan competition to name Acorn's new baby failed to find a good enough name which hadn't already been used by someone else. 'Phoebe' was one of the key project names behind the new machine.



However, in response to feedback, the '2100' has been dropped, 'Risc PC' re-introduced and the final new name for the 'yellow peril' is officially Phoebe Risc PC II. Expect the new machine to be called simply Risc PC II, Phoebe Risc PC II or, just plain Phoebe. A new logo, one of half a dozen candidates, has been chosen to reflect the new name.

The deal for advanced orders is very interesting. Since the £1499 price tag for the Risc PC II was announced in early Summer, component prices have fallen steadily. In the past, Acorn early-adopters have sometimes been frustrated by price cuts soon after product launches. To counter this possibility again, Acorn are offering a discount matching your pre-purchase advanced order deposit, up to a maximum of £500. That maximum deposit reduces the price to a much more attractive £999. The offer is only available to Clan members and ends on October 31st. Of course, there is nothing to stop you from joining the Clan beforehand, if you aren't already a member.

It's a wise move as the Clan membership fee is one-off for life – nobody, initially, should really be paying £1499 if they have any sense. Customers who have already placed advanced orders and there are said to be several hundred to date, will still have an opportunity to take advantage of the offer.

Meanwhile, Chris Cox says his new marketing team is busily preparing the Risc PC II's launch publicity blitz, including the creation of a new slogan: 'Acorn – Revolutionary Computers'. The slogan will appear in advertising and marketing campaigns primed to fire on the launch of the new Risc PC, but, alas, that day has slipped by one month because of production delays surrounding Acorn's new custom chip, IOMD2, which controls memory management and interfacing of peripheral devices and ports.

Risc PC II won't, now, be on sale at Acorn World, though full-speed pre-production prototypes will be there for all to see. Incidentally, estimates from key design team personnel, Pete Fox and Mike Stephens, suggest that Risc PC II will be between 2-4 times faster than an existing Risc PC running many applications, despite sharing the same 233MHz StrongARM processor. Graphics, especially will run some 3-4 times faster.

Acorn hits deeper financial gloom

ARM holding to be liquidated?

Acorn have revealed dire financial figures for the first half of 1998. On top of this, Acorn's new management says it is exploring ways of ending their shareholding in ARM Ltd. Revenues for the first half of 1998 fell from £14.2m during the same period in 1997 to £5.3m in 1998. Reduction in so-called 'traditional' product sales – primarily to education customers – were attributed to a loss in revenue from £8.5m in 1997 to £3.0m in 1998.

However, the great white hope – consultancy and licensing activities – also saw a fall from £5.6m in 1997 to an aggregate £2.3m. The group's operating loss increased from £1.0m in 1997 to just over £5.6m in 1998. This was due to a number of factors: overall reduction in consultancy activity due in large part to the loss of the business previously generated by Acorn's work for Oracle/NCI affiliate, the diversion of skilled staff to a number of R&D activities and the continuation of Acorn's Risc PC II development, which alone incurred almost £1.0m of costs in the period and writing off development costs of £0.7m previously capitalised in 1997.

Meanwhile, Risc PC Mk I sales have reduced substantially in anticipation of the new Risc PC. While the business has been contracting, Acorn technically was in a surplus situation at the end of the quarter. This was because of the flotation of ARM, which netted Acorn a windfall of £14.2 million (pre-tax). This has enabled Acorn to repay their loans in full, but as of 30 June 1998 the Group had just £4.7m in cash remaining. The subject of ARM, of which Acorn still owns 26 per cent, has become a focus of strategic planning at Acorn.

A statement by Acorn said: "The Acorn Board believes that the present situation regarding the ARM investment is unsatisfactory in two regards: The Acorn Board believes that many shareholders in Acorn would prefer to hold shares in ARM directly rather than indirectly through Acorn; and the management of Acorn wishes to focus on growing value from its core businesses. The ARM stake represents an investment over which the Acorn Board has limited control and influence, whilst continuing to consume management resource."

ARM's value to Acorn is largely tied up and any attempt to convert the share holding into a more useful equity would incur substantial tax charges. So, there is no immediate solution in sight, but the Board is looking hard at how they can extricate themselves from ARM and so free up capital currently existing as ARM equity.

Meanwhile, Acorn reminds us that their core business has basically been unprofitable since 1993. The Acorn financial statement comments: "The Acorn Board believes that the Company still retains significant technical expertise which can be profitably developed, but that this development needs to be undertaken in the context of a focused business plan executed by a strengthened management team. Such an approach maximises Acorn's ability to build and develop technology alliances, implement workable business models and maximise the contribution of key contributors within the company."

The previous strategy of scouring the market for any kind of business which could employ Acorn technology is to be abandoned in favour of focussing on carefully evaluated targets, like digital TV and thin client devices. Chris Cox says his Workstation division, of which we at *Acorn User* are most closely linked to, is not under threat and that business is as usual. However, the Acorn financial statement does talk of disposals and projects to be externally funded. Exactly what this all means remains to be seen.

Acorn re-groups once again

It seems like just yesterday that Acorn's senior vice president, Peter Bondar, was talking of moving to the US to head up Acorn's software division there and CEO, David Lee, was expressing his hopes for the company after the £14 million windfall brought about by ARM's successful stock market flotation. Just a few weeks after we spoke to both Acorn figures, they were out on a limb, unceremoniously quitting the company along with several colleagues after a routine board meeting. Near-disastrous financial results, revealed in this issue of *Acorn User* (see other story), begin to explain things, but we have been digging further and we have found evidence of a more complicated scenario. Most of the information we have unearthed is unattributable, but has been corroborated by various people.

Peter Bondar

It all seems to centre around NCI, the Oracle spin-off which was entrusted with the nurturing of the Network Computer standard. Oracle/NCI was, of course, a critical life-line to Acorn three years ago. Acorn were the first company to deliver an NC reference platform prototype to Oracle and the company basked in the warm glow generated by this achievement.

Last year, it was clear that the relationship with Oracle had cooled off as NCI pursued an Intel-based strategy. No matter, we thought, Acorn were now embarking on an exciting new future off the back of their Oracle relationship, making NCs and developing all manner of products for a long line of big name companies all over the world.

The cooling down of the relationship with Oracle/NCI was, we are led to believe, more problematical than had been publicly stated. We understand that Acorn were actually in dispute with NCI over fees due to Acorn unpaid by NCI. The outstanding amount has been described to us as being 'substantial'. Just how you deal with a situation like this demands some political astuteness. Although Acorn's fling with Oracle was at an end, companies associated with Acorn and with some influence on Acorn's board of directors, continue to value their relationships with Oracle.

The theory is that some on Acorn's board wanted to press ahead with legal action to recover the debt, but this was effectively rejected by certain quarters on the board. In situations like this, the CEO's tenure becomes very difficult. Meanwhile, Peter Bondar, who had effectively been running Acorn on a day-to-day basis last year, had to present a very sobering set of financial figures and this was met by board dissenters who weren't convinced that Acorn's corporate plan was ideal. Somehow it all came to a head and we all know the result.

Now, yet again, Acorn is re-structuring. Out goes the idea of being a generalised hi-tech development consultancy competing for contracts which have, in the past, ranged from designing a global positioning satellite (GPS) receiver, a custom fax device and a multimedia tourist advice terminal. The new Acorn hierarchy, under CEO Stan Boland, believes that Acorn's destiny lies in more clearly defined market sectors, like digital TV and thin client terminals. This strategy splits the company in two; computing products and digital TV products. The Workstations division, which

REVOLUTIONARY
• Runs existing applications.
• Support for new hardware.
• 64MHz memory architecture inside.
• Easily upgraded case, requiring no screws.
• Includes PCI card interface.
Acorn
Phoebe
RISC PC 2
Acorn
Revolutionary Computers

David Lee

is headed up by Chris Cox and includes responsibility for consumer and education products, lies within the 'computing' side of the company. There have even been hints that the digital TV side of the business may shed its Acorn branding, which some perceive as more of a hindrance than an asset.

In line with a return to a more product-oriented model on the computing side of the business, Acorn says they will no longer unnecessarily pre-announce products. This was a favourite ploy of Peter Bondar and it remains an effective way of testing the market when touting technology-based development services, but it causes problems when dealing with actual products. A sharp fall in sales of Risc PCs, which started last year, has been blamed on publicity regarding the Risc PC's successor reaching as far back as two years ago. Talk of technologies which never happened, like CHRPS — the Power PC common hardware reference platform, which was once a favourite of Peter Bondar, have also been blamed for a confusing Acorn's customers.

Will anything change? In the end, despite their undoubted problems, Acorn actually have an enviable record for survival. The players and the plot seem to change with ominous regularity, but the play must go on...

BT's digital comms for all

Thinking of buying a modem? It might be worth a wait. Thinking of upgrading to ISDN? It might also be worth a short wait. By the time this issue of *Acorn User* reaches you, BT will have launched their Highway digital phone service for existing analogue phone customers.

Home Highway, for residential customers and Business Highway for business customers, converts your existing phone line to ISDN (integrated services digital network), the digital telephone standard. It actually differs from the conventional ISDN service which has been on offer for several years because it is piggy-backed onto your existing ordinary phone line.

BT also provides a pair of analogue phone sockets as standard, so you don't need any extra equipment in order to retain the use of your existing phone, fax machine or even an ordinary modem. Crucially, for some, Highway preserves the call options you would have to give up with standard ISDN, like the Call Minder voice mail service or analogue CLI (calling line identification).

With Highway, just as with standard ISDN, you have all the benefits of two-channel digital communications at 64 kilobits/sec, so you can make a phone call on one channel while surfing the Internet faster than a conventional modem, or even doubling up the two channels to 128Kbits if your Internet service provider supports it. Of course, you will need a suitable ISDN data adapter for your computer and these are available as serial port 'modems' and in the future it should be possible to fit PCI ISDN cards to the new Risc PC II. Don't forget, as you can make two simultaneous phone calls using a single two-channel ISDN line, it is charged similarly to a pair of ordinary phone lines.

DOWN PAYMENT.

Your deposit to Acorn	Phoebe RRP excluding monitor	Balance to dealer
zero	£1,761.33	£1,761.33
£100.00	£1,761.33	£1,561.33
£200.00	£1,761.33	£1,361.33
£300.00	£1,761.33	£1,161.33
£400.00	£1,761.33	£961.33
£500.00*	£1,761.33	£761.33

* Applicable to Clan members only. To join the Clan, add your £15 membership fee to your Phoebe deposit payment.
All prices quoted are inclusive of VAT. Deposits are not subject to refund. Acorn cannot take responsibility for errors or omissions.
Example shown does not include a monitor. The full range of product options is on the Phoebe pages at http://www.acorn.com/acorn/

Acorn is delighted to announce an amazing, one-off deal, exclusive to Clan and Acorn User Group members, to mark the launch of the long awaited Phoebe Risc PC 2 - the fastest Risc PC ever.

This great offer is also your chance to reserve yourself one of the limited number of Phoebes to be available this year.

The offer is simple: Acorn will discount the Phoebe's recommended retail price, including VAT, by the amount of deposit you make.

This is up to a maximum of £500 for Clan members or £400 for Acorn User Group members, and all deposits must be in increments of £100. The table above shows all the options.

You can make your deposit either by telephone, giving credit card details, or by completing and returning the form with your deposit cheque to Acorn TODAY!

We'll post you a confirmation certificate for you to present to your local Acorn dealer as proof of deposit paid. It's as simple as that!

So what are you waiting for?

Dealer sales line **01223 725920**

Join the revolution now and start saving.

Complete the form below and return it to us, enclosing your cheque made payable to Acorn Computers Ltd, for the deposit amount you prefer.
Address your reply to Phoebe Offer, Acorn Computers Ltd, Acorn House, 645 Newmarket Road, Cambridge CB5 8PB.

Name ______________________________

Address ______________________________

______________________________ Postcode ____________

Daytime telephone no. ______________________________

Email address ______________________________

Clan membership no. or name of User Group ______________________________

I would like to join The Clan and my cheque includes my Phoebe deposit and my £15 Clan membership fee ☐

OR

I am already a Clan or Acorn User Group member. I have enclosed a cheque in respect of my Phoebe deposit only ☐

Deposit sum ☐

Deposits are non-refundable
Offer ends 31 October 1998

Ultra-high resolution digital camera

AGFA
ePhoto 1680

Agfa have unveiled an even higher resolution version of their 'split-body' digital still camera. The new version, which is silver instead of black is called the ePhoto 1680 and like its predecessor, the ePhoto 1280, can produce pictures at a resolution of 1280 pixels across. The difference is that the 1680 camera produces 'real' 1280 pixel images, not artificially interpolated ones like the 1280 camera.

In other words, the quality is substantially better – which is no mean feat as the older version was pretty good already. A 2x digital zoom has been added to the list of features and the price is the same as the old model's original introductory price of £599 + VAT. Irlam Instruments (tel: 01895-811401) currently support Agfa digital still cameras with RISC OS drivers and image transfer software.

They tell us it will probably take just a minor tweak to make the existing package compatible with the 1680 and they will naturally do this should there be demand.

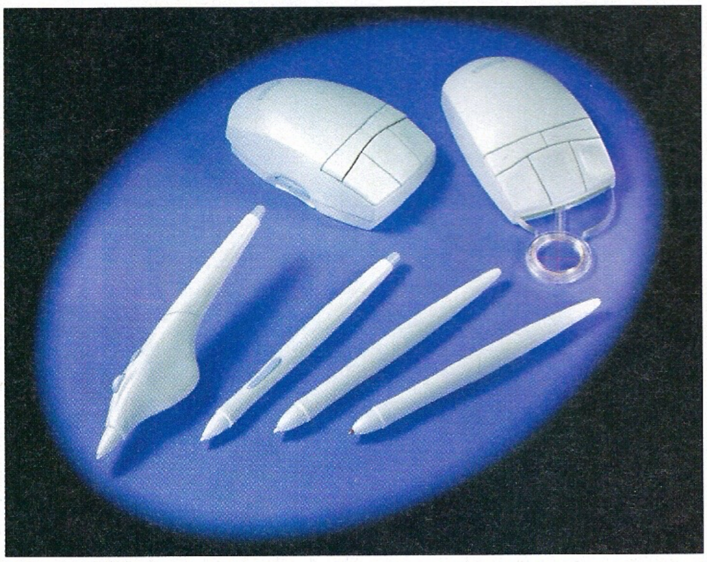
Alsystems upgrade Cumana SCSI 2 cards

Power-tec

Alsystems have expanded their range of Power-tec SCSI products with the announcement of their new Power-Flash Ultra SCSI 3 upgrade for Cumana SCSI 2 cards. Alsystems modestly claim that the upgrade offers a 'staggering' increase in performance for Cumana SCSI 2 users when used with a fast hard disc drive.

The upgrade involves replacing the old SCSI 2 controller chip with a powerful new Ultra SCSI 3 Controller IC and installing new software. Alsystems say all existing SCSI 2 peripherals will work correctly with the new Controller IC as well as any new Ultra SCSI devices. It's not a DIY upgrade, but Alystems will soak test your card to ensure it's working reliably and the upgrade is guaranteed for a full year. The upgrade is priced at £49 + VAT, with £5 + VAT carriage. Alsystems, e-mail: sales@alsystems.co.uk, Web: http://www.alsystems.co.uk, tel: 01420 561111, fax: 0420 561100.

New tablet range from Wacom



Graphics tablet maker, Wacom have announced a brand new range of products, called Intuos, which will succeed their ArtPad II and UltraPad families. Wacom tablets are probably the most popular devices for graphic artists in the Acorn world. Wacom describes Intuos as an intelligent graphics tablet system, comprising of five new tablets and six different pressure-sensitive input devices.

The company say they have counted more than a dozen ergonomic advances in the process. A key priority during the design process was to ensure that all the products were suitable for both right and left-handed users.

The decision to go for a wide selection of input tools is a radical departure from Wacom's previous product ranges as they recognised that a single tool would not be optimally suited to all aspects of graphical input. The different devices include the Intuos Pen, 4D Mouse, Lens Cursor, Stroke Pen, Inking Pen and an Airbrush. Digital technology now replaces what was formerly part-analogue, making the 4D Mouse and Airbrush variable settings possible for the first time. A Tool ID feature automatically identifies the user's chosen tool device to the pad being used. A favourite brush can be assigned to a particular tool and this will be instantly used should you decide to change from one tool type to another.

The inherent smartness in Intuos doesn't end there – more than one user can use the same tablet and the Tool ID feature can be configured to automatic brush selection settings can be switched to the current user's preferences. Prices start at £129 for the Intuos A6 tablet and Intuos Pen, reaching up to £579 for the Intuos A3 including Intuos Pen and the 4D Mouse.

Please note, it's likely that existing Wacom drivers for RISC OS will need modification before the new products will work on Acorn kit.

The UK distributor for Wacom is Computers Unlimited, tel: 0181-358 5857, WWW: http://www.unlimited.com

A small drop of Epson, please

As we discovered in our recent look at ink-jet printers, Epson have a pretty hard act to beat. Not content with sitting on their laurels, Epson have introduced a next-generation ink-jet technology based around their piezo-electric print head which can now generate ink droplets of just six picolitres in volume.

This is 55 per cent less than the ink-jet droplets produced by the Epson Stylus Photo and Stylus Color printers we looked at only a couple of months ago. Epson also explains that their new technology, called Advanced MicroPiezo, can change the size of an ink droplet according to the requirements of the pixels being printed. By changing the droplet size you can have finer control over image contrast and brightness as well as detail.

Despite the more complex print head, Epson claims the new printers which use it are actually 40 per cent faster than their older siblings. Top of the range of printers which features the new MicroPiezo technology is the Epson Stylus Colour 740. This is also fitted with a USB (universal serial bus) port, which should be available as a third-party add-on for the new Risc PC II some time in the future.

For more information, contact Epson UK Ltd, on tel: 0800 220 546. Hopefully, Spacetech will quickly expand their range of Epson Stylus printer drivers to encompass the new MicroPiezo range.

memos
letters
business cards
invitations
photo enlarging
CALENDARS
reports
Brochures
flyers

New products/upgrades

Product	New features/product details	Price	Contact
Revise Mathematics CD-ROM	* For GCSE revision and FE courses involving basic maths skills * Allows teachers to record scores to monitor progress * Fully compatible with the National Curriculum	£69 + VAT for 5 user school site licence. Network versions also available	AVP Tel: 01291-625439 E-mail: avp@compuserve.com
Infra red remote control for computer	* Easily configurable * Mouse control from a distance * Emulates key presses * Single button launch of apps * Only works on the internal serial port	£35	Eurisko Software E-mail: info@euriskosoft.demon.co.uk
SpeakerPhone	* Designed to be used with a voice modem, giving access to the speakerphone and voicemail facilities * Compatible with all Acorn computers with a serial port and RISC OS 3.1 and above (inc StrongARM)	£25	Eurisko Software E-mail: info@euriskosoft.demon.co.uk
Acorn SCSI card PowerROM upgrade (for Acorn, Castle Technology, Cumana, HCCS, Lingenuity, Morley, Oak or VTi cards)	* Gives your old card a new lease of life * Full SCSI command set and all the functionality and compatibility of the Power-tec SCSI card	£35 plus £5 p&p (ex VAT)	Alsystems Tel: 01420-561111 E-mail: sales@alsystems.co.uk WWW: http://www.alsystems.co.uk/order/
New Power-tec Atapi drivers — PowerAtapi	* Soft loadable * Allows access and use of a large range of Atapi CD-ROM drives, including multi-changers * Additional drivers that support the ATAPI Iomega Zip 100 drive * 90 day FREE technical support	£35 plus £2 p&p (ex VAT)	Alsystems Tel: 01420-561111 E-mail: sales@alsystems.co.uk WWW: http://www.alsystems.co.uk/order/

What about PC Cards?

Precious little has been said, so far, about prospective PC-compatibility for the new Risc PC II. Unlike the current Risc PC, there is no dual-processor slot and so the only way to run PC/Windows applications is via one the four PCI bus slots which will be provided as standard with all Risc PC IIs.

Acorn won't be producing cards themselves, but have revealed that at least one third-party supplier has practically completed the necessary software adaptation of an existing PCI PC card for Risc PC II. These same cards are produced to meet demand mainly from the Apple Mac world for PC-compatibility. The open standard PCI bus is considerably faster than the old podule bus and so DMA memory access to share system memory with RISC OS is a practical possibility, but as memory is so cheap today and the PCI bus would still remain a considerable bottleneck for important burst-mode data transfers.

Therefore, expect Risc PC II PC cards to have their own memory and possibly their own built-in PC display circuitry. Such a card would still share Risc PC resources like the floppy disc, serial and parallel ports, hard disc and CD-ROM access and sound. The best news for Windows users is that, unlike the old dual-processor solution, they can expect performance and compatibility much closer to the best that a typical PC can offer.

Instead of being stuck with 486-level PC processors, Risc PC II's should have access to 'real' Pentium processors. Of course, nobody will claim that a PC card is an ideal solution to replace a stand-alone PC, but if you do decide that your desk hasn't enough space for two boxes, a PC card inside a Risc PC II will be a much more satisfactory solution than that of the old Risc PC.

All this is somewhat of a back-track by Acorn as the design of the new Risc PC II acknowledges that the dual-processor arrangement in the existing Risc PC was over-complicated, expensive and, ultimately, technically inferior in PC terms. Still, it was worth a try... Pricing and availability are still a secret and we don't yet have official confirmation of who will be marketing Risc PC II cards. So watch this space.

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

New!

PowerFlash

£49

Great new upgrade for Cumana SCSI II card owners...

Yes exactly what you've been waiting for; the ability to re-engine your Cumana SCSI II card to powerful Ultra SCSI III.

Simply bring along your Cumana SCSI II card to Stand 65 at Acorn World and our technicians will replace your old SCSI II chip with a powerful State-of-the-Art Ultra fast SCSI III controller IC while you look around the Show. For your peace of mind, your SCSI card will be thoroughly tested on site to ensure data integrity. Indeed, we are so confident in the product that we are giving a 12 month hardware warranty with every PowerFlash SCSI III upgrade, just like new! Your goods will be ready for collection as you leave the Show.

This new powerful SCSI III Controller IC is backwards compatible with SCSI II devices, so there's no need to worry. Simply plug your new SCSI III card into your Acorn computer, run the installer software and your SCSI devices, such as hard discs, scanners and CD ROM drives will work as before.

Main Features of PowerFlash:

- Multi-tasking with Risc OS.
- Read-ahead/write-after cacheing.
- User-selectable LFAU size setting.
- User-selectable number of sectors per track.
- Support for DOS formatting and direct addressing of DOS drives.
- Supports SCSIBlock Commands.
- Multi-tasking format and verify.
- Supports Synchronous and Asynchronous transfers.
- Carries out Power-On-Self-Test (POST) on start-up.
- ATAPI and SCSI CD ROM drivers included (inc Toshiba, NEC, Pioneer, Hitachi etc).
- Support for multi-changer CD ROM drives.
- Support for PhotoCD.
- Support for AudioCD sampling.
- Supports DVD drives.
- Supports CD-R and CD-RW drives.
- Supports Epson, Mustek, Microtech and Umax Scanners.
- Supports Jaz, Zip, SyQuest, SyJet, Mag-opt, Nomai removable media drives.
- Supports ALL harddrives from ALL manufacturers.
- Support for RiscBSD.
- Support for Risc OS 3.1, 3.11, 3.12, 3.5, 3.6, 3.61, 3.7 and 3.71.

http://www.alsystems.co.uk/power-tec/powerflash/

Writable PowerATAPI

£99

Power-tec Writable ATAPI Driver and IDE Zip Drive

New low cost **writable** Power-tec Atapi drivers that support the IDE/ATAPI Iomega Zip 100 drive, giving you full write and read capability with Risc OS or DOS format discs.

These drivers also support a wide range of CD ROM drives including Multi-changers and CD R/W drives (suitable for Risc OS 3.1 onwards).

Main Features:

- Full Media interchangeability between SCSI Zip and Parallel Zip drives!
- Ability to copy between cartridges, just like copying between floppy discs.
- Ability to read Argo Zip Discs.
- Software Eject of Zip Cartridges by using the Filer Menu Eject option.
- Drive icons minimised when drive not present/switched off (software checks state every 5 seconds).
- Express Install (Easy) & Advanced Configuration Modes.
- Configuration Utility (!PowerMgr) may be password protected to safeguard from misuse.
- Up to 24 CD ROM icons on the icon bar simultaneously.

http://www.alsystems.co.uk/power-tec/poweratapi/

Power-tec

The complete disc solution

Acorn PowerROM

£35

Power-Up with an Acorn PowerROM!

At last after a two year wait, the new PowerROM upgrade for the Acorn SCSI card is now available!

PowerROM upgrades are available for the following cards:

Acorn • Castle Technology • Cumana
HCCS • Lingenuity • Morley • Oak • Vti

Old SCSI card owners can now benefit from all the features Power-tec SCSI card users enjoy as well as being Risc PC/StrongARM compatible.

The PowerROM upgrade gives your old SCSI card a new lease of life with the full SCSI II command set and all the functionality and compatibility of our Power-tec SCSI cards.

Main Features:

- Read-ahead/write-after cacheing.
- User-selectable LFAU size setting.
- Support for DOS formatting and direct addressing of DOS drives.
- Multi-tasking format and verify.
- Carries out Power-On-Self-Test (POST) on start-up.
- ATAPI and SCSI CD ROM drivers included.
- Support for multi-changer CD ROM drives.
- Support for PhotoCD.
- Support for AudioCD sampling.
- Supports CD-R and CD-RW drives.
- Supports Epson, Mustek, Microtech and Umax Scanners.
- Supports Jaz, Zip, SyQuest, SyJet, Mag-opt, Nomai removable media drives.
- Supports ALL harddrives from ALL manufacturers.

http://www.alsystems.co.uk/power-tec/powerrom/

Acorn World
Stand 65

£500 off

Phoebe RISC PC 2

We will have a selection of Parallel, IDE and SCSI Hard Drives, removable devices such as Zip and Jaz, CD ROM Drives, Scanners., Memory Upgrades, Processors, Printers, PC Cards.

Our engineers will be on-site at the show to perform upgrades to your machine while you visit the rest of the show.

PowerZip Plus

iomega zip Plus

Power-tec Zip Plus Driver

Alsystems is pleased to announce the Power-tec Parallel Port Zip Plus Driver software which is available with the Zip Plus drive.

The Parallel Zip Plus driver is soft loadable and will allow you to access, format and partition Zip cartridges and utilise a number of new features which are listed below.

Main Features:

- Disc write protect option (using Password).
- Media interchangeability of SCSI and Parallel Zip(+) Discs.
- Ability to copy between cartridges, just like floppies.
- Ability to read Argo Zip Discs.
- Configuration Utility may be password protected.
- Up to Eight Disc Partitions on the icon bar simultaneously.
- Drive icons minimised when drive not present.
- Icons may be hidden or removed if partition is not required.
- Icon bar icons may be customised.
- Ability to easily unprotect and partition Zip Tools discs.
- Ability to create many partition types including: DOSDisc.
- Ability to read and write DOS format cartridges.
- Full !Help on-line support and command line operation including *Help.
- Allows full use on Acorn Access+ peer to peer networks.

Please note that PowerZip+ is suitable for the Iomega Zip Plus drive in parallel mode only and requires Risc OS 3.1 or later OS and a bi-directional parallel port.

NB: Choose PowerZip driver for standard parallel port Zip drives.

http://www.alsystems.co.uk/power-tec/powerzipplus/

Prices

PowerFlash	Ultra SCSI III upgrade for Cumana SCSI II:	**£49**
PowerAtapi	with Internal Iomega IDE/ATAPI Zip Drive:	**£99**
PowerAtapi	Writable Driver only:	**£35**
PowerIDE	Driver:	**£25**
PowerJaz	with JazTraveller Interface:	**£49**
PowerJaz	Driver only:	**£25**
PowerROM	Upgrade (state make of SCSI card):	**£35**
Power-tec	Fast SCSI II card:	**£135**
Power-tec	Ultra SCSI III card:	**£175**
Ultra SCSI III	Upgrades:	
	v1.0x Standard Upgrade:	**£110**
	v2.0x Standard Upgrade:	**£49**
PowerZip	with Iomega Parallel Zip Drive:	**£115**
PowerZip	Driver only:	**£25**
PowerZip+	with Iomega Parallel/SCSI Zip Plus Drive:	**£115**
PowerZip+	Driver only:	**£35**

NB: All prices exclude VAT and carriage.

Please call or e-mail us for more details...

Alsystems

47 Winchester Road, Four Marks,
Alton, Hampshire, GU34 5HG, UK

Tel: +44 (0)1420 561111 **Fax:** +44 (0)1420 561100
E-Mail: sales@alsystems.co.uk **WWW:** http://www.alsystems.co.uk

public domain

Dreamscape

Mark Seaborn's *Dreamscape* C++ class has now reached version 1.20. The library includes support for desktop programming and features routines for rendering graphics. You can download *Dreamscape* from http://www.argonet.co.uk/users/mseaborn/dscape/dscape.html

NumberFix

Many programs like Spacetech's *Photolink*, as well as a host of PD gfx utilities, output, or require the input, of sequentially numbered files. *NumberFix* is a handy tool that lets you re-order the files if some are deleted. Author Jochen Lueg has also tackled a few other annoying processes.

NumberFix will add PC-style filename extensions to files, modify the filename to add a string or modify the filenames to get a list of numerically ordered filenames in proper order (appending 0's to single figure names). This is obviously very handy if you've ever had to do that kind of job, and in a large batch of files situation, *NumberFix* can save you a lot of time. The program works via a setup window which holds all the changes to be applied to the set of files. Select the options you want, then drag a selection of files from a filer window onto *NumberFix*. A highly recommended little tool that does the job well. You can also find an array of other rather handy utils on Jochen's Web page at http://www.argonet.co.uk/users/tudor

WebGet

WebGet is a recursive downloader of Web pages by Joseph Heenan that lets you grab a website and view it offline. As Joseph describes "*WebGet* is an application that allows you to queue Web pages to be subsequently downloaded, and can also optionally download images and frames, and follow links within the pages — all are user configurable when you request the URL to be fetched." You can locate the app on Joseph's website at http://www.ping.demon.co.uk/acorn/webget.html

Recommended PD Libraries

- APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
- ARM Club PD Library, Freepost ND6573, London N12 0BR
- Five Star Marketing, 4 Shepherds Walk, Bushey, Hertfordshire WD2 1LZ

Photofiler

Photofiler is an automatic image thumbnailer from PD page regular, Dave Thomas. On startup, the application installs itself on the left hand side of the iconbar and puts several modes of functionality into operation.

The primary purpose of *PhotoFiler* is to display the icons of image files as small pictures or thumbnails of the image itself. The application supports Sprites, Drawfiles and JPEGs, and functions completely automatically. The program provides thumbnail icons in any filer windows you open.

Photofiler's main purpose is similar to that provided by utils like *Profiler* or *Filer+* but *Photofiler* also provides some rather nifty extras. The first of these is support for using custom sprites for specific directories. Again, not a new idea, but a useful implementation with handy on/off access from the iconbar menu. More importantly, there's a clever fix for a part of RISC OS that I'd become so accustomed to that I didn't really regard it as a problem. The filenames of applications have to begin with plings and this does make directory displays look rather messy.

Photofiler can optionally remove plings from directory displays — in appearance only. There's obviously the possibility of confusion without any plings to immediately indicate which file icons represent programs. It's certainly something I need to try out in everyday use before I can properly judge it.

As with all of Dave's programs, it's well implemented and nicely configurable. The only bug I could find was a crash on opening a directory that contained a crunched sprite. Something I'm sure Dave will fix very swiftly.

To install *Photofiler's* stylish icon onto your iconbar, point your browser at http://www.sliced.demon.co.uk/software/photofiler/ and get downloading.

Revelation 98

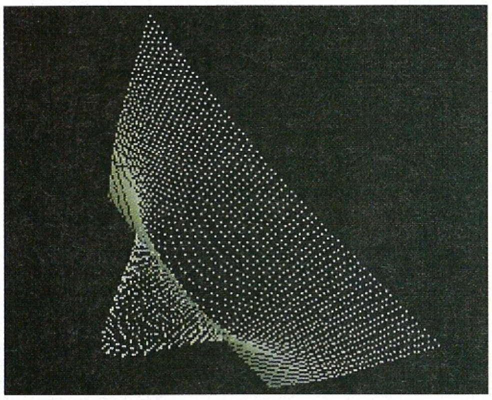
Competition for the fantastic Phoebe prize at this year's Revelation demo party is really hotting up. The event which takes place at Acorn World is set to be the biggest demo competition on the Acorn so far.

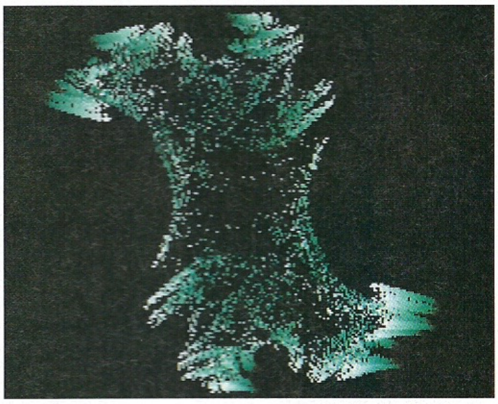
Entries are expected from a whole range of groups, both from the UK and abroad. DFI, Kulture, Icebird, Divine Nation, Reactive and last year's winners, the Nutters should be in close competition. There'll also be a demo from Icebird coder, 7, aka Kai Prociennik who's temporarily leaving the group to produce his own demo, and entries from several other unknowns looking to make their mark. We may even see Arm's Tech taking up the challenge.

All this promises some great releases and an interesting event, with all the demo crews on hand. So get down to the theatre at Acorn World on Saturday afternoon, and take part in the voting for the best StrongARM powered graphics demo.

Some of the demo coders at last year's Acorn World show. From right to left, Kai Prociennik of Icebird, Frederic Elisei of Arm's Tech, Vincent Lefèvre and in the "bouncer pose" on the left, AU's PD editor

Delirium 2





Since the review of the first release of *Delirium* in the September issue, Kulture coder Joe Oldak has been hard at work on a completely new version of the front end. Working on suggestions and criticisms of the original, Joe has completely updated the program to feature options like save/no save corners, complete dimming control and icon/no icon options.

There's also an array of bug fixes that have been fuelled by a considerable list of beta testers. It's great to see the users and developers working together. The initial front end came under quite a bit of criticism on the c.s.a.a newsgroup and Joe has done very well to update the application and supply a program that the users want.

Enthusiasm for the product has spawned a number of third-party saver fx. These include the very popular dots by Steven Singer and Robin Watts and the excellent Blur Space by Tom Thorne. Several new fx have also been released by the Kulture team and more are on the way. There's even rumours of interest from Acorn about supporting *Delirium* in the future.

Check out the program on the Internet at http://www.variousartists.demon.co.uk/delirium/ or from Five Star Marketing. You will also find the application on this month's cover CD, but it's well worth checking the website for the latest savers and updates to the front end.

Utils round-up

There are few new applications for review this month, but lots of tasty utilities. *Thintools* by James Shiell squashes your window tools (title bar, drag bars etc) to give your desktop a little more space. Not too essential for most people, but the 7 pixel saving can be rather handy when your screen is cluttered with frames while Web browsing. Check http://sevenup.home.ml.org/

Retouq is yet another sig inserter, this time by top BBS man, Matthew Page. As Matthew describes "This little program was written in about five minutes after a conversation with a bloke called David Hart, who was complaining that most of the 'auto tag line/sig inserter' programs about tended to put unwanted <CR>'s in or added a silly copyright line, or were too complicated to use." *Retouq* implements a no-nonsense inserter that reads from a simple sig and tag file both of which are ordinary text files. *Retouq* can be found on Matthew's ARM Pit BBS on 01733-445800 (24 hours).

IconizBar is a Shareware utility that takes over the management of window iconising on the pinboard. A Win95 style bar is created along the top of the screen that holds windows when they are minimized. The bar displays the usual window title as well as an icon. Various configuration options are available for window position and sprite handling.

Although the pinboard allows you to arrange and manage iconized windows dynamically, it makes sense to keep them together and separate them from short-cut icons. *IconizBar* does the job well, and with the option selected to hide the bar when the pointer isn't over it, it's really quite usable. Kees Grinwis' *Iconizbar* is Shareware with a registration fee of only £5. Contact Kees at tabsoft@dune.demon.nl or by snail-mail at Weststraat 41, NL-3253 AR OUDDORP, The Netherlands.

Finally, Rob Clark's *Applets* is a manager utility to take care of your *Ovation Pro* Applets. The prog allows you to install or uninstall Applets by dragging them between panes in the main window. You can find *Applets* on Arcade BBS.

Acorn Office 98

Acorn Office 98. A big name that unfortunately isn't quite lived up to by the application itself. *AO98* provides a toolbar to launch applications from. Not really anything new, and there are several other programs that provide extra functionality over what this offers. So after seeing the name and then the program it's a bit of a let down.

Some users may find it handy however, and I can imagine it being useful on something like a school network, with all the main applications set up on the toolbar. *Acorn Office 98* is Shareware with a registration fee of £5. Check the website at http://www.everymans.com/acornoffice/ or contact the author Peter Price by snail-mail at The Beeches, Shelton Park, Shrewsbury, Shropshire, SY3 8BL.

Sheet update

A new version of Tim Dilks' PD spreadsheet program is now available showing the development we were hoping for. Tim says "I have had quite a large number of e-mails, which has certainly given me the encouragement to carry on developing *Sheet*." Version 0.33 which can be found on the Web at http://www.compsoc.man.ac.uk/~tjd features full drawfile export and several bug fixes. If you'd like to contact Tim to find out more, and tell him what you want to see implemented in *Sheet*, send e-mail to mjfi5tjd@fs1.ce.umist.ac.uk

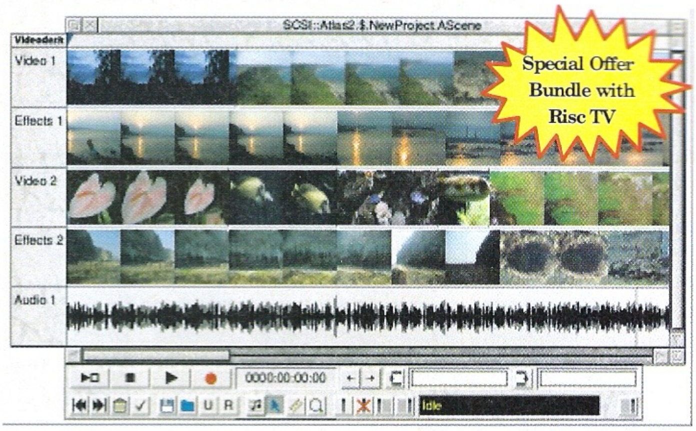
AntUtils

Version 1.11 of Paul Vigay's handy *AntUtils* program is now available from his website at http://www.interalpha.net/customer/pvigay/shareware.html As well as bug fixes, there's also a new imaging feature. As Paul describes "*AntUtils* will now automatically create an HTML index page containing a table of thumbnail images for any directory containing image files. This allows you to use your favourite Web browser to view your image files."

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to aupdpage@idg.co.uk

Videodesk
Non-Linear Video Editing System.



Special Offer
Bundle with
Risc TV

Videodesk is a significant advance in video editing for Acorn machines which allows full-size, full-colour and full-motion video to be compressed to disc in real-time. The compressed video is edited frame accurately and output back to video for recording or display. Unlike tape-based editing systems there is no generation loss and edits can be played back instantly.

Key Features:

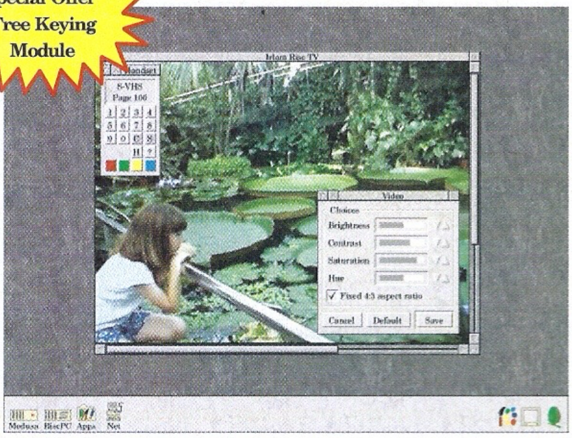
- Composite and S-Video inputs and outputs.
- 50 fields per second capture and playback.
- 24 bit colour range.
- Resolution of up to 768 pixels x 576 lines.
- High-quality uncompressed still grabs.
- VITC Timecode input and output.
- 16 bit stereo audio inputs and outputs.
- Audio sampling at up to CD and DAT rates.
- Multiple audio tracks (polyphonic).
- High performance Replay movie capture.
- Multi-level undo and redo.
- Edit Decision List (EDL) generation.

Videodesk is supplied complete with video editing software as standard, which is sophisticated, flexible and simple-to-use. Editing is done on a multi-track time-line with separate audio and video tracks. Effects are generated digitally and include over 100 dissolves, wipes, fades and slides. Software is being continually developed and comprehensive titling software is now available at no extra cost. Titles are generated using the outline font system and can scroll, flash, fade and be overlayed onto the video or appear on their own. Titling is done digitally and does not require a Genlock.

RiscTV is supported for on-screen monitoring up to full-screen size and there is a specially priced bundle when purchased together with **Videodesk**. **RiscTV** and **Videodesk** are both available now. See below for more information about **RiscTV**.

Risc TV Desktop Television System.

Special Offer
Free Keying
Module



Risc TV is a unique multimedia digitiser complete with built-in television tuner and audio processor. It allows you to watch television on the desktop and digitise high quality still images from the tuner or an external video source.

RiscTV has special hardware which is used to update the screen, so your computer runs at full speed and the real-time display is always true colour (24 bit) irrespective of screen mode. The display can also be scaled to any size or made full-screen.

- Suitable for A5000, A7000, and Risc PC.
- On-screen sizes of over 1024 x 768.
- Real-time scaling, filtering and control of contrast, brightness and saturation.
- Auxiliary inputs for Composite & S-Video.
- Low-cost Teletext option.
- Optional keying module allows **Risc TV**'s display to be obscured by other objects and still provide real-time overlay.
- Optional audio upgrade provides NICAM stereo audio, 16 bit sound sampling, audio mixing, plus Replay movie capture.

For the Complete Picture...

Irlam Instruments Ltd, Brunel Science Park, Brunel University, Kingston Lane,
Uxbridge, Middlesex, UB8 3PQ. Tel/Fax 01895 811401. Email: sales@irlam.co.uk
Website: www.irlam-instruments.co.uk

Please note: Videodesk requires a RISC PC, large fast hard disc and 8Mb RAM minimum. A StrongARM processor is recommended. Check suitability for your computer before ordering. 1 years guarantee. E & OE.
*To obtain good quality video requires storage of around 1.5Mb per second (5.4Gb per hour).

Access

VISA

A bit over the Weather

Now the Autumn season is with us, we can look back to the summer of '98; 'the summer that never was' that is, except for a few days in August. On one of those sunny days I happened across the UK Meteorological Office website. It has sections on the purpose and aims of the Met. Office, its history, how forecasts are made, and descriptions of research and development projects, as well as up-to-date forecasts and details of its commercial services.

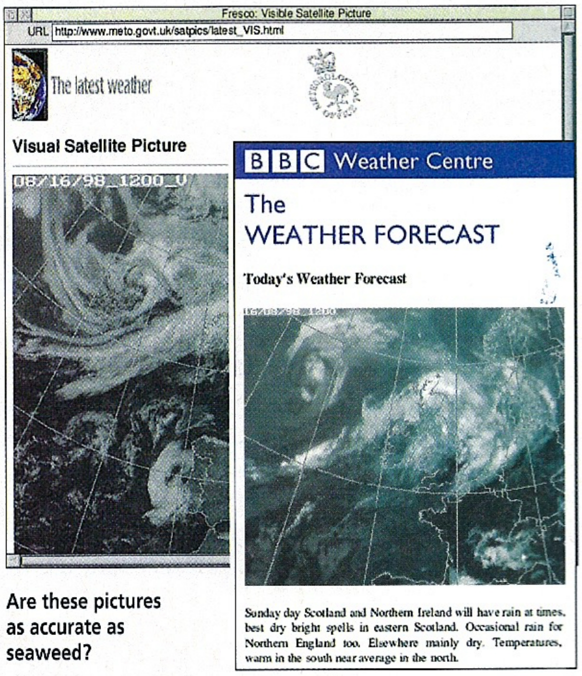
24 Hour Forecasts of the weather prospects for the fourteen Public Met. service regions of the UK are available with other specialist reports. You can display the Shipping and Inshore Forecasts as supplied to the BBC, and try your hand at reading them out aloud to fit into exactly ten minutes – offline preferably.

The Met. Office now offers the latest marine weather information delivered to via the SMS (Short Message Service) to a digital mobile phone – currently to Vodafone subscribers only, costing between 30p and 50p per message. You can choose a one-off or regular hourly update if you really need (and can afford) it.

That day's online Visible Satellite image of Europe shows clear skies over the South of England. The Met. Office site has links to other weather websites, one being that of the BBC Weather Centre. Here, the same day's satellite picture shows the infra-red view where the shading shows the temperature of the cloud tops and is used by the forecasters to measure cloud height.

The BBC Weather Centre site also provides information about the work of the Centre and its forecasters. The weather maps are produced by two DEC Alpha computers receiving data directly from the Met. Office in Bracknell, and Apple Mac machines link the presenter's interface via an Ethernet link to hard disc video frame stores that replay the presenters' map animations at up to 25 frames per second.

The Meteorological Office
http://www.met-office.gov.uk/
BBC Weather Centre
http://www.bbc.co.uk/weather/



URL http://www.meto.govt.uk/satpics/latest_VIS.html

Visual Satellite Picture

The WEATHER FORECAST

Today's Weather Forecast

Sunday day Scotland and Northern Ireland will have rain at times, best dry bright spells in eastern Scotland. Occasional rain for Northern England too. Elsewhere mainly dry. Temperatures, warm in the south near average in the north.

Are these pictures as accurate as seaweed?

Networking jabber

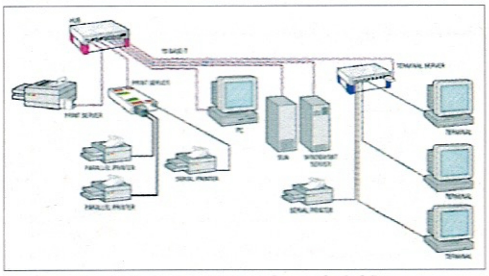
For those interested in learning more about Networking, Philip Blundell's comp.sys.acorn.networking FAQ is regularly posted to comp.sys.acorn.announce, comp.sys.acorn.networking, comp.answers and news.answers, and can be read online and downloaded from http://www.tazenda.demon.co.uk/phil/csan-faq

Philip calls the document "a compendium of knowledge to do with making Acorn machines talk to each other and the world." Subjects covered have intriguing names like AUN, Access+, masquerading, proxying and bridging. Some of these are Acorn-specific buzzwords that Philip explains in the context of Acorn computers. Other sections cover the implementation of clients and servers in a wider context.

For a general overview and explanation of Networking terms and techniques, a comprehensive three-part Ethernet Web tutorial is provided by US company Lantronix of Irvine, California. The first section covers Networking Basics, describing Ethernet as an ideal networking technology, but susceptible to contention for network bandwidth and collisions if too many users are on a simple network. Part two explains ways to increase throughput for larger networks by adding bridges and switches to filter and forward the data rather than just passing it on around the network, and the third part deals with device sharing and remote access.

Not surprisingly, Lantronix can supply the bits of hardware they recommend. Their website also has a glossary of networking terms you've always wanted to know more about, like PAP, CHAP and Jabber.

Lantronix Ethernet tutorial
http://www.lantronix.com/htmfiles/mrktg/catalog/et.htm



A view of my bedroom network – only joking!

Racing Demon

Demon Internet now offer connections to their Energis ROMP (Regionally Organised Modem Pool) in Finchley at the new V.90 56kbps modem standard. Customers can now connect at every existing 56k standard currently available by using Demon's various ROMPs, including K56Flex and the US Robotics x2 proprietary standard.

Although I'm still waiting for the V.90 upgrade for my USR x2 Courier, I got a 48,000bps connection when I dialled their little-advertised and unsupported x2 access number 0845 301 1666. For details of Demon access numbers, see http://www.demon.net/connect/pop/pops.html

How to design websites

You'll be dazzled by this outstanding example of website design, and they'll create one just like it for you if that's what you want. In their own words, reproduced exactly: "If you are looking for an internet persent, look no further than the Bud Uglly Design comnpany. Since Febuary, Bud Uglly has been responsible for the creation of a multitude of high powdered websites form industry leaders around the glob!" If that whets your appetite, visit the Bud Uglly Web site for an almost unique oxymoronic experience.

Bud Uglly Design comnpany
http://www.wwwvoice.com/bud/bud.html

CyberSnare

Roberto Di Cosmo is a Professor of Mathematics at L'Ecole Normale Supérieure in Paris who has interesting ideas on technical and strategic issues in the information society. Acorn users will recognise his distaste for the monopolistic view that there's only one kind of computer; a PC running *Windows*. You can read his thought-provoking treatise "CyberSnare" written in French at http://www.mmedium.com/dossiers/piege, or in English at the US reference site.

CyberSnare
http://www.netaction.org/msoft/cybersnare.html

Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181 654 2212.

RETAIL

BEEBUG

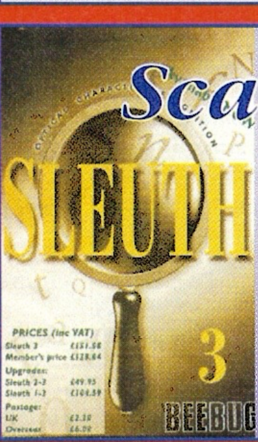
Established since 1982

for all your Acorn needs

A standing Ovation

Ovation Pro is the leading desktop publishing package for Acorn users; and as such we'd recommend its purchase to all; (£193.88 full retail, or £139.88 as an upgrade) but what if you just want an advanced word processor? Try the original Ovation; now including Desktop Thesauras and Getting into Ovation book [whilst stocks last] at £80.

Scanner Deals



Get the Plustek Optic Pro, together with ImageMaster, TWAIN and Sleuth 2 OCR software for just £135 inc VAT.

Alternatively, the BJC4300 scanner head; again with ImageMaster, TWAIN and Sleuth 2 OCR for just £135 inc VAT.

New baby

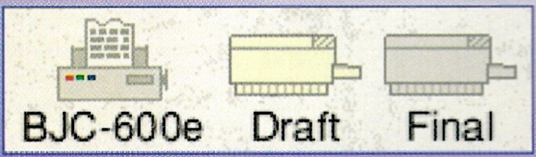
We're now taking deposits for the new Acorn computer. £100 inc VAT [which will be banked] secures your position!

Call today for information on Beebug offers!

RECONDITIONED A5000s are also available, from only £400 inclusive. Call for details of specifications.

Don't forget the Risc PC & A7000+!!!

Printer Specials



Brother Laser Printers

HL730	£330.00
HL1050	£341.00

Epson Stylus Inkjet Printers

New launch: Stylus Colour 440 series; with superb print quality. Call for best prices.

Once you've got a scanner, a DTP package and a new computer how about a printer? Check out our prices!

Acorn World

We'll be at Acorn World demonstrating scanners, Sleuth 3, Ovation Pro, Phoebe 2100 [yes ..] and lots more!

Zipping along

There our now several options for removable storage which we supply. For details of Zip, Zip+, Syjet, EZFlyer and Jaz drives write or phone today!

BEEBUG Limited, 117 Hatfield Road, St Albans, Herts AL1 4JS
Tel: 01727 840303 Fax: 01727 860263 Email: sales@beebug.co.uk
Carriage is £11.75 on hardware, £4.20 on Ovation offer & Ovation Pro. E&OE.

Graphical vision

With the Phoebe 2100 almost upon us, where is the Acorn graphics scene going? It's always a tricky question to answer in a niche market like the Acorn one. The path of progress is almost guaranteed to be a rocky one as we've seen in the past. But despite the many problems, I believe we have a bright future.

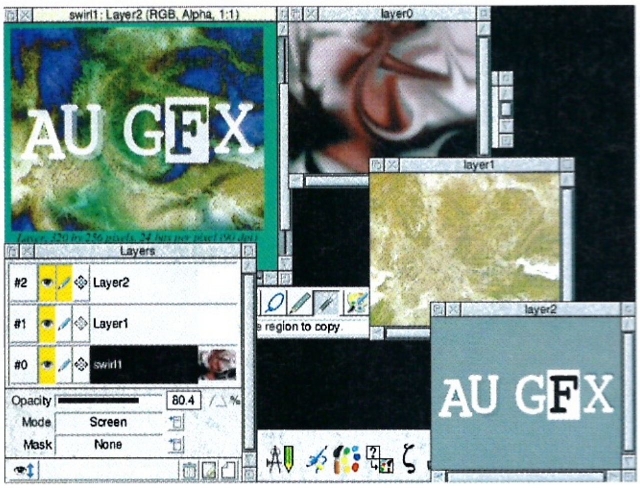
The RiscPC with 24-bit capability moved us into the real world as far as graphics are concerned and it certainly was a great leap forward. The hope has been that the Phoebe will provide similar advances and I believe this will be the case despite the depressing outcome of many of the Phoebe-related discussions on the csa newsgroups of late.

The StrongARM is already giving us an impressive processing turnover but the old RiscPC bus is severely holding it back. With a faster bus and VIDC, the data and graphics bottleneck should be removed, freeing up the power for our existing graphics applications and opening up the way for the development of new software. PCI support could also prove to be a revolution on the graphics scene but we'll really have to wait and see how popular support for PC graphics cards becomes.

Our existing range of graphics applications are far from satisfactory and I'm sure most of you will watch the latest development from the likes of Astute Graphics, Spacetech and Aspex rather closely. However, what we do have, shouldn't be underestimated. Developing 3D tools like *Da Vinci* and bitmap tools like the impressive *Photodesk*, cannot be forgotten. When you combine excellent applications like *Photodesk* with the usability of the RISC OS desktop you have a level of graphics productivity that you simply can't match on the PC. Use *Photoshop* on a PC with all its amazing effects plug-ins? Give me the usable Acorn solution of *Photodesk* every time. From this basis, the future is bright.

It's an optimistic answer to the question I placed at the top of this article, but I really believe we have every reason to feel this way and I'm sure we'll see some encouraging results over the coming months.

Photodesk 3 uncovered

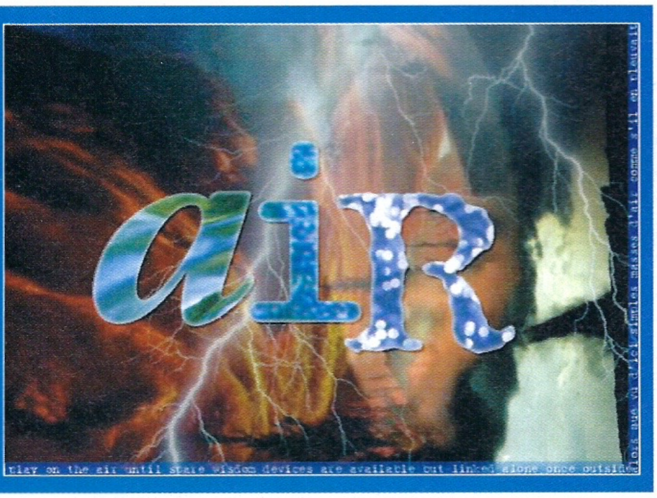


Photodesk 3 is finally with us, bringing the ability to work on separate layers while they are combined in real time to be displayed as the working canvas. The Layers facility is the main change from version 2, and it's a shame we haven't seen more features introduced. However, as I've mentioned elsewhere in this column, *Photodesk* is already an outstanding package and can certainly stand up against *Photoshop* on the PC and Mac.

Spacetech
Tel: 01305-822753

Picture of the month

This issue's picture of the month comes from the talented hands of French artist Stephane Habett Roux. Selecting one picture from Stephane's very stylish website at http://perso.wanadoo.fr/habett doesn't really do it justice, so enter the URL into your browser and simply click the screen to cycle through the images. Keep those entries coming in


aiR
play on the air until stare wisdom devices are available but linked alone once outside

Farewell Jack

On behalf of all at *Acorn User*, I'd like to say a big thank you to Jack Kreindler for his sterling work on the Graphics page over the last few years. Jack has had to give up writing the column due to the obvious time pressures of becoming a Junior Doctor. I'd like to wish Jack all the best for the future and I'm sure this won't be the last we'll hear from him in the world of Acorn graphics.

Enter Paul

I'll be attempting the difficult task of filling Jack Kreindler's shoes over the coming months in my new role as Graphics editor. Regular readers will know me from my many contributions to the magazine over the last five years. As well as my role as PD editor I have already contributed significantly to the graphics coverage with reviews of many of the Acorn scene's key products like Spacetech's impressive *Top Model* application.

In terms of experience, my background includes bitmap and 3D design and a great deal of work writing the code behind demos and applications like the *Delirium* screen saver. This gives me a hands-on approach to graphics scene. Over the coming months I'll be charting developments in the graphics world and giving my views in a pixel by pixel account of what's going down. I'd very much welcome your input on the column, whether you're a developer or reader, so please get in touch at the address below with your news and views.

21" performance

Hitachi have joined the "space race" to produce compact 21in monitors. The idea is to provide a high quality large screen display, at a box size that doesn't engulf your desktop. Clocking in at a depth of only 470mm, the new CM811ET comes at a RRP of £662 and provides resolutions of up to 1600x1200 at 75Hz with a dot resolution of 0.22mm.

Hitachi
Tel: 0181-849 2000
WWW: http://www.hitachi-eu.com

Contacting me

You can contact the Graphics page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to augrafix@idg.co.uk

Up to £500 OFF

Phoebe

RISC PC 2

Order a Phoebe - RiscPC2 before 31st October 1998

with a deposit of £100 TO £500 (in increments of £100) and receive a discount OFF the RRP equal to the deposit paid!

AND

Receive a Desktop Projects Voucher worth £25 which can be redeemed against any items in our normal price list up to the same value.

6 Months Interest Free Finance is also available on the above offer.

Payment Summary. Monitor NOT Included (Prices INCLUDE VAT)

Deposit Paid	RRP	Discounted Price	Balance to pay
£100	£1761.32	£1661.33	£1561.33
£200	£1761.32	£1561.33	£1361.33
£300	£1761.32	£1461.33	£1161.33
£400	£1761.32	£1361.33	£961.33
£500	£1761.32	£1261.33	£761.33

ADD £130 for 14"Monitor, £370 for iiyama 400 (17") or £390 for iiyama 400 Pro (17")

Ring 0161-474 0778 NOW to secure your Phoebe.

You MUST be a Clan member to take advantage of this offer. Join at time of ordering for £15.
The Voucher is only valid at Desktop Projects until 31.12.98 & cannot be used in conjunction with any other offer.

2A Heapriding Business Park, Ford St, Stockport. SK3 0BT. E&OE.

Desktop Projects Ltd

PC Pro 3.0 is here

For quite some time now I've been heralding the imminent arrival of the new *!PCPro*. Well now it's here on my machine, so what's new?

To begin with it's the most friendly *!PC* yet – both to install (or upgrade) and to use. The disc includes the installer software which includes *!PC*, a system update which you may not need but which is safe to run anyway as it will not alter an adequate system, plus a routine for updating the toolbox modules – something you may well need especially on older computers.

Running *Install* is simple with drag and drop to tell it where your existing files are and several options screens (such as Figure I) which allows you to configure the items you need. The greyed options here tell me they are already installed on my system, the one option left uninstalled is the one item to give me problems I've as yet not resolved. Network links can also be installed automatically now which is a real boon for network users. Follow the procedures and you soon get to Figure II which not only shows the new versions of *!PC* and *Config* but also the saved old version plus a utility to make a boot disc.

It may be worth repeating here to save copies of your old *!PC* and your *!Boot* file before starting. I did hit problems with my RISC OS boot files which were frankly of my own making – in fact a toolbox patch I'd inserted into *!Boot* to run some beta test software that needed it. *!PC* cannot be expected to second guess everything and it took me a while to get the *!Boot* system to work as intended. Not the least problem was my *!Boot* backup was out of date. Mea culpa – but you have been warned.

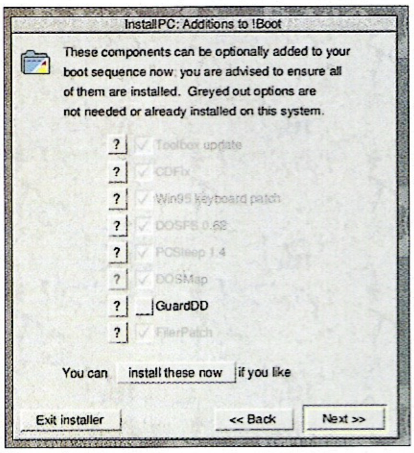
Okay, so now you are ready to go – almost. One big change is that *!PCPro* now supports multiple config files. This can certainly help when using *!PC* for wildly different purposes that need, for example, different screen resolutions, disc set-ups or, perhaps more to the point, for different installations offering Win3.1 and Win95. To make this work smoothly, *!PCPro* is now launched from *!PCConfig*. This allows the set-up and selection of the multiple config files in a neat and simple way – see Figure III. Each setting can be given a name to suit yourself and called from a menu.

Once launched there are some more neat tricks that make *!PC* easier to use. You can, naturally, use it in single task mode. But the multi-tasking mode in a RISC OS window has been greatly improved. Figure IV shows the new sidebar which allows changes on the fly. The snowflake freezes *!PC*, you can alter RS232 and printer access options, screen settings and even reset using the red !. I'm personally very fond of the mouse icon. One click on that and the RISC OS pointer becomes a PC pointer. Menu click on the Acorn mouse and the pointer reverts to RISC OS. This makes multi-tasking much simpler and quicker.

Aside from the features detailed above, *PCPro3* supports VESA 1.2 and VESA 2 so will run a few more games sometimes with considerable speed increase and should also be faster in DOS. It can be configured to support various SCSI devices and is much friendlier to use. Thus far it has proved fully stable even though my version is still labelled beta-test. It still lacks DirectX support, but at long last that is now under way and will be a free upgrade to *PCPro3*.

My verdict? Nice one, a considerable improvement. You should certainly consider upgrading especially since it is so easy to do and a necessity if you want DirectX as this cannot be made to work on earlier *!PCs*.

Aleph One
Tel: 01223-811679
WWW: http://www.aleph1.co.uk/

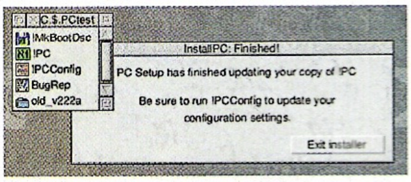

InstallPC: Additions to !Boot

These components can be optionally added to your boot sequence now: you are advised to ensure all of them are installed. Greyed out options are not needed or already installed on this system.

- ☑ Toolbox update
- ☑ CDFix
- ☑ Win95 keyboard patch
- ☑ DOSFS 0.62
- ☑ PCSleep 1.4
- ☑ DOSMap
- ☐ GuardDD
- ☑ FilerPatch

You can install these now if you like

Figure I

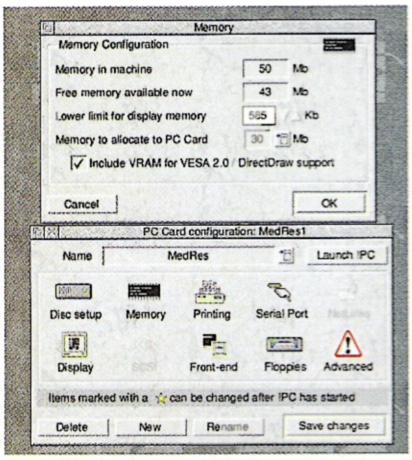


InstallPC: Finished!

PC Setup has finished updating your copy of !PC

Be sure to run !PCConfig to update your configuration settings.

Figure II


Memory

Memory Configuration

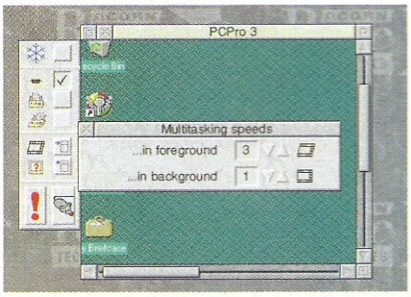
Memory in machine 50 Mb
Free memory available now 43 Mb
Lower limit for display memory 585 Kb
Memory to allocate to PC Card 30 Mb
☑ Include VRAM for VESA 2.0 / DirectDraw support

PC Card configuration: MedRes1

Name MedRes

Items marked with a ☆ can be changed after !PC has started

Figure III


PCPro 3

Multitasking speeds
...in foreground 3
...in background 1

Figure IV

The PC Card is dead – long live the PC card

In the past I've mentioned the imminent demise of the PC card as we know it and it seems there's still confusion out there about the potential for PC cards in the future. Will Phoebe also run Microsoft PC software?

The Risc PC has two processor slots – one for the ARM, the other used for the PC card. Phoebe does not have the extra slot, so the current cards will not be of any use.

However, Phoebe does have some PCI slots – strange to Acorn users but familiar in the world of Bill Gates, these are the slots that are used to plug in anything from graphics accelerators to modems and sound cards. You can also plug in a PC card. Not Acorn PC cards as we know them, but Windows PCs on a PCI card. These are expansion cards with most of the guts of a PC – processor, memory and main chip-set on a PCI expansion card. These are commercially available for the PC market but could be adapted for use in Phoebe.

They will, of course, simply plug into Phoebe without physical change and electrically they will be compatible. The problem is that software will have to be written to give the PCI card access to any shared resources such as keyboard, mouse and screen. That software will also have to manage data transfer between platforms.

So the hardware is not a great problem. When (whether?) the software gets written is another matter. Aleph 1 are looking into this but cannot be anything other than reticent about options until they get their hands on a Phoebe and the full spec. I imagine they will also watch early sales figures of Phoebe with interest. The better the machine sells, the more likely is a new Phoebe version of *!PC*.

As for potential performance, it's impossible to be exact, but a rough estimate is that Phoebe's architecture ought to support a reasonable Pentium P2. So as with *!PC*, you can't expect Phoebe to deliver shattering performance for the latest and bestest 3D graphics games – but it could be a highly credible platform on which to run business software, plus a few good games too.

Contacting me

You can contact me, Mike Buckingham, by post at: *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP or by dropping me an e-mail at: aupcpage@idg.co.uk

Davyn Computers

Tel: 01924 254800 **Fax:** 01924 258036
E.Mail: sales@davyn.demon.co.uk
WEB: http://www.davyn.demon.co.uk

Bargain Basement

10 out of 10 Algerbra		£10.00a
Alderbarron	(Evolution)	£5.00a
Boxing Manager	(Krisalis)	£5.00a
Corruption	(Magnetic Scrolls)	£5.00a
Frame-It 1 or 2	(Davyn)each	£5.00a
Publisher irregular frames		
Hero Quest	(Krisalis)	£15.00a
Landmarks full range	(LL)each	£28.00a
Music Box	(Topo)	£20.00a
Number Tiles	(Topo)	£17.00a
PhotoBase1930s,50s,60s	Each(LL)	£39.00a
Prime Mover	(Minerva)	£20.00a
Pro Artisan 2	(Clares)	£90.00c
Pro Driver	(Ace)	£10.00a
Science Series CDx3	(YITM)	£40.00a
Small	(Virgo)	£15.00a
SmArt	(4Mation)	£37.00a
SmArt Files	(4Mat)each	£17.00a
SmArt File Mod.Lang.	(4Mat)	£21.00a
StartWrite	(AP)	£8.00a
Tiny Puzzle	(Topo)	15.00a
Waiter	(Digital)	£15.00a

Spares & Repairs

A300/400		
backplane 2/4 pod	S/U	£30.00b
memory upgrade 2mb	new	£79.00a
memory upgrade 4mb	new	£89.00c
Power Supply	Refurb/Exch	£40.00c
A400/1		
backplane 4 pod	S/U	£30.00b
Floppy Drive	S/U	£30.00b
memory upgrade 1mb	new	£35.00a
Power Supply	Refurb/Exch	£40.00c
A3000		
Floppy Drive	S/U	£30.00b
High Density Floppy Drive	new	£90.00c
Keyboard	S/U	£20.00b
memory upgrade 2mb	new	£39.00a
memory upgrade 4mb	new	£65.00a
PCB	Refurb/Exch	£90.00d
Power Supply	Refurb/Exch	£30.00c
Power Supply	Refurb	£40.00c
A3010		
Floppy Drive	new	£89.00c
Keyboard	S/U	£20.00b
memory upgrade 1-2mb	new	£34.00a
memory upgrade 1-4mb	new	£65.00a
PCB	Refurb/Exch	£120.00d
A3020		
Floppy Drive	new	£89.00c
Keyboard	S/U	£20.00b
memory upgrade 2-4mb	new	£59.00a
PCB	Refurb/Exch	£120.00d
A4000		
Floppy Drive	new	£90.00c
Harddisc 210MB IDE	S/U	£80.00c
memory upgrade 2-4mb	new	£59.00a
PCB	Refurb/Exch	£120.00d
Power Supply	Refurb/Exch	£40.00c
A5000		
Floppy Drive	new	£99.00c
Keyboard inner	S/U	£20.00b
memory upgrade 2-4mb	new	£79.00a
PCB	Refurb/Exch	£139.00d
Power Supply	Refurb/Exch	£40.00c
RPC		
PCB MK 2	Refurb/Exch	£149.00d
Power Supply	Refurb/Exch	£40.00c
Fits All Computers		
IDE/CD interface	new	£69.00c

These are just a small selection of new and refurbished spares ring for details

Printers

Canon		
BJC-250	(colour)	£109.00d
BJC-4300	(colour)	£139.00d
BJC-4650	(A3 colour)	£299.00d
BJC-620	(colour)	£229.00d
Epson		
Stylus 400	(colour)	£129.00d
Stylus 600	(colour)	£169.00d
Stylus 800	(colour)	£289.00d
Stylus 1520	(A3 colour)	£639.00d
Hewlett Packard		
DeskJet 400L	(colour)	£99.00d
DeskJet 690C	(colour)	£189.00d
LaserJet 6L	(Black)	£319.00d
Calligraph		
A4 1200 Laser	(black)	£1099.00d

Printer Inks/Refills

COLOURS INKS AVAILABLE

Jet Black, Cyan, Magenta, Yellow, Brown, Dk Green, Lt Green, Dk Blue, Dk Red, Lt Red

Inkjet Refills are an economical way of re-charging your existing cartridge All inks come complete with gloves, syringe and easy to use instructions.

Single	20ml Any Colour	£6.00a
Twin	2x20ml Any Colour	£10.00a
Bulk	125ml Any Colour	£21.00b

'CartridgeMate' A new and easy to use cartridge refill system for HP 51626A high cap. cartridges

A refill system with no mess

Comprises: CartridgeMate & 2 x 40ml	
Ink Tanks Cartridge not included	£30.00b
Ink Tank 2 x 40ml	£20.00a

We also carry a large stock of inkjet cartridges and ribbons

Printable Items

Colour'n Wear (2 white Baseball Caps + 3 transfer papers)	£10.50b
Colour'n Wear (2 white T Shirts + 4 transfer papers	£13.50b
Colour'n Wear	
(4 transfer papers only)	£9.00a
(10 transfer papers only)	£13.50b
Design & Print Mouse Mat	£4.00a
Col Inkjet matt photo white paper 25 sheets x 120gms	£5.50b

Scanners

Plustec OpticPro 300x600dpi	£69.00d
Above + Imagmaster/Twain	£99.00d
Epson GTX5500 scsi	£239.00d
Epson GT9500 para/scsi	£539.00d
Image Master/Twain Driver	£35.00a

Special Offer

up to £500.00 Discount on new PHOEBE

RING HOTLINE 01924 254800

RRP
£1760
£££ OFF
NEW
out October
Phoebe
RISC PC 2

- 64MHz bus performance
- 0.35µm process
- Semaphore for multiprocessing
- Multiple DMA controls
- Multiple Master Arbitration System
- A High Speed I/O world and multiple bus mastering
- An Improved VIDC20 for bigger & better screen modes
- A Codec for better standard audio support
- A new high speed EIDE interface for up to 4 drives
- A PCI bridge to provide industry standard expansion, 4 slots
- 3 x Acorn podules
- Memory 32 Mb synchronous DRAM (or greater)
- 4 Mb of EDO VRAM
- 2 x serial ports
- Joystick port
- Irda & MIDI port
- 6.4 Gig HD
- 32x CD

Acorn Computers Special Offers

A7000+		8m	1.2GB HD		£799.00d	AMC10
A7000+		8m	1.2GB HD	8xCD	£849.00d	AMC50
RiscPC	233	4m	1.2GB HD	8xCD	£956.00d	SRP21
RiscPC	233	10m	1.7GB HD	8xCD	£1249.00d	SRP26a
RiscPC	233	34m	1.7GB HD	24xCD	£1249.00d	SRP41

- ● 486 DX4-100 Card for £58.00 When bought with new RiscPC
- ● (486 upgrade to 586 please add £30.00 to above price)
- ● £235.00 Trade in on your old Computer Only on SRP26a & SRP41

Extended Warranty

A7000 / A7000+ 3 years	£94.00
A7000 / A7000+ 5 years	£188.00
RPC StrongARM 3 years	£235.00
RPC StrongARM 5 years	£470.00

Monitors

Acorn AKF74	£176.00d
Acorn AKF92	£640.00d
Iiyama 17"MF8617E .26dot	£399.00d
Samsung 15" Syncmaster	£179.00d

Memory

RiscPC 16Mb RAM	£29.00b
RiscPC 32Mb RAM	£45.00c
RiscPC 1Mb VRAMsimtec	£59.00c
RiscPC 2Mb VRAMsimtec	£95.00c

RPC Upgrades

2 podule Backplane	£34.00a
486-DX4-100 PC Upgrade	£230.00d
586-100 PC Upgrade	£350.00d
586-133 512k PC Upgrade	£360.00d
Access+ Card	£139.00c
Strong Arm upgrade 233	£289.00c
Audio Mixer	£39.00a
Movie Magic	£279.00c
Risc OS 3.7 Chips + Software	£58.00b
Second Slice *no PSU*	£90.00d
Second Slice *with PSU*	£116.00d
Sound Card	£69.00b

Hardware Upgrades

170mb IDE 2.5" HD	£65.00c
340mb IDE 2.5" HD	£95.00c
6.4gb IDE 3.5" HD	£169.00c
4.3gb SCSI 3.5" HD	£299.00c
Casio QV-11 inc.Software	£376.00d
Casio QV-100 inc.Software	£519.00d
Casio QV-Mains Adaptor	£15.00a
Lark Midi Sound-Sa.	£172.00c
Risc OS 3.1 Upgrade Chips	£30.00a
RiscTV *(Irlam)*	£295.00c
Teletext module for above	£45.00a
SCSI 16bit	£110.00c
SCSI 2 32bit (power-tec)	£158.00c
SCSI 3 32bit (power-tec)	£205.00c
TV Tuner + Teletext	£159.00c

All Upgrades fitted free if ordered with Computer else £18.00

Portable Computers

Special Offer £169

Pocket Book 2(1MB)		£169.00c
A,M,or PC+-Link	(each)	£59.00b
Parallel Link		£29.00a
Power Supply		£14.50b
Flash SSD 1MB		£119.00c

Finance

(Acorn Items Only £1000.00 min)

Option 1		
NO deposit	6 Months	0%
Option 2		
NO deposit	24 Months	9.9%
Option 3		
NO deposit	36 Months	19.9%

Personal finance is available to qualifying purchases. Credit subject to status. Written quotation on request.

How To Order

Cheques: should be made payable to **Davyn Computers**

Credit Cards: you may also pay byVisa, Delta, Euro, Switch, Electron, or Master Card. We normally make no charge for this, and take no payment until goods are ready for dispatch, We need the card holders address and telephone number, card number and issue number if any and the expiry date.

Carriage: charges are as follows

a	Small Recorded	£2.00
b	Medium Recorded	£3.50
c	Med/Large Recorded	£5.00
d	Courier	£10.00
e	Courier Large	£15.00

Official Orders: are welcome from UK education and government institutions (invoices are due for payment within 14 days and are subject to carriage and late payment charges).

VAT is included:

Order Address: please send your orders to;

Davyn Computer Services
'The Workshop'
off Princess Street, Sandal,
Wakefield, West Yorks. WF1 5NY

Opening Hours:

Monday	9.30 - 5.30
Tuesday	9.30 - 5.30
Wednesday	9.30 - 5.30
Thursday	9.30 - 7.30
Friday	9.30 - 7.30
Saturday	9.30 - 5.30

Terms: All products, prices and specifications are offered in good faith and are subject to change without notice. We Process all orders immediately, but suppliers do sometimes keep us waiting. Goods are guaranteed but are not supplied on approval. Returns and cancellations can only be accepted by prior agreement and there may be a restocking and administration charge A full copy of our terms are available upon request.

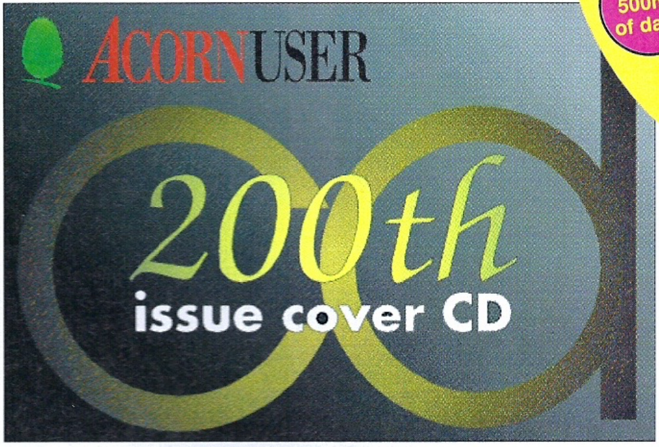
E.&.O.E 8th September 1998

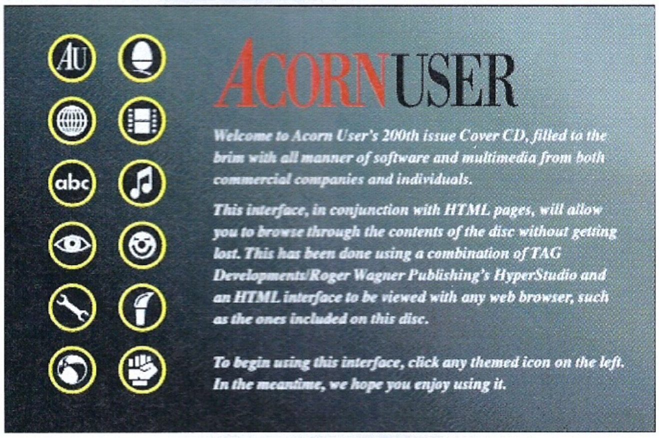
Additional Adverts at our Web Site www.davyn.demon.co.uk & TheAcorn S/W Consortium

cover disc

Acorn User 200th Edition CD-ROM

ACORN USER
Items include:
The new Acorn !Boot sequence - the first release
Multimedia
Movies, clip art
Sounds and images
Games
Syndicate, Artex
and Destiny demos
Websites
Acorn Cybervillage
Acorn Arcade
Emulators
The complete collection
to relive the old days
Over 500mb of data!
200
th issue
cover CD
See magazine for further details
© IDG Media/Stephen Scott 1998





Welcome to Acorn User's 200th issue Cover CD, filled to the brim with all manner of software and multimedia from both commercial companies and individuals.

This interface, in conjunction with HTML pages, will allow you to browse through the contents of the disc without getting lost. This has been done using a combination of TAG Developments/Roger Wagner Publishing's HyperStudio and an HTML interface to be viewed with any web browser, such as the ones included on this disc.

To begin using this interface, click any themed icon on the left. In the meantime, we hope you enjoy using it.

Welcome to the fourth magazine cover CD, produced to celebrate our 200th edition, and to also bring to you the best Acorn multimedia around.

The disc has been specially formatted to include CDFS extensions, such as filetype mapping and so on, allowing Acorn users with CD-ROM drives to access software and data directly from the disc. The disc can be also used on non-Acorn machines to enable users without CD-ROM drives to download items using a PC or Macintosh.

There are several pieces of exclusive software on the disc, the major item being the new Universal *!Boot* sequence from Acorn, which is much easier to use than ever before. Please ensure you read the accompanying documentation before installing it.

This year's cover disc again utilises an interface designed using the Acorn version of *HyperStudio,* but alongside it are HTML files listing most of the software available in the categorised directories of the CD. This way, you can easily find your favourite piece of software. Due to lack of time, not every piece of software is listed, but is still comprehensive enough to be of use when exploring the contents.

There are three possible ways of running the CD; you can either just browse idly through the content, use the *HyperStudio*/HTML interface, or just using the HTML pages. To use the *HyperStudio* interface, double-click on the START file in the root directory. To use the HTML interface only, just double click on the CDINDEX/HTM file. It should be noted that the stack player requires 4Mb of memory and RISC OS 3.1 or later in order to run properly.

In both cases, you need to make sure your computer has 'seen' either the stack player *!HSPlayerF*, or a suitable Web browser. If you do not have a Web browser then you can find a selection in the WEB.UTILITIES directory.

By installing a Web browser, you can view the websites located within the WEB directory. These sites include the Acorn Cybervillage, the Acorn Gaming and Acorn Arcade sites, the Archive website, and many more. Some of these websites have had to be installed as archives in order to protect the length of their filenames, but it is possible to view the sites within them.

Other sites require the installation of image filing systems such as *LongFiles 2* and *X-Files,* which are also provided on the disc. Acorn users without CD drives will be pleased to know that most of these sites are provided as Zip files as well, so they can be unpacked on a PC or Macintosh and viewed from there.

For more information on using this disc, please consult the !README text file in the root directory. An article describing my exploits will appear in the near future. In the meantime, I hope you enjoy using the cover CD. All comments and suggestions are welcome.

November Disc

Are you missing the November cover floppy disc with *INFO and Run the Risc? It's on the CD under the *Acorn User* category.

But perhaps you don't have a CD-ROM drive? If that's the case and you want the November 1998 disc, just send us the CD4 from the cover as proof of purchase, your name and address and we will return the CD and a floppy containing the November files.

Shareware and Freeware

- Throw custard pies at Bill Gates in a silly game
- Use TextTool to make modifications to text files
- AlphaSave – a simple new screensaver

Regular items

- Rambles: Bass pedal controller
- Rambles: More personal organiser bits
- *!Shooter* and *!Tracy*, not a gangster and his moll but a IR reader and sender
- Plus all the *INFO programs.

Disc information

The software on these discs has been compressed using *ArcFS 2* from VTi, and are opened by running a copy of *ArcFS* then double-clicking on the archive to open it. There is a copy of *ArcFS* on the disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

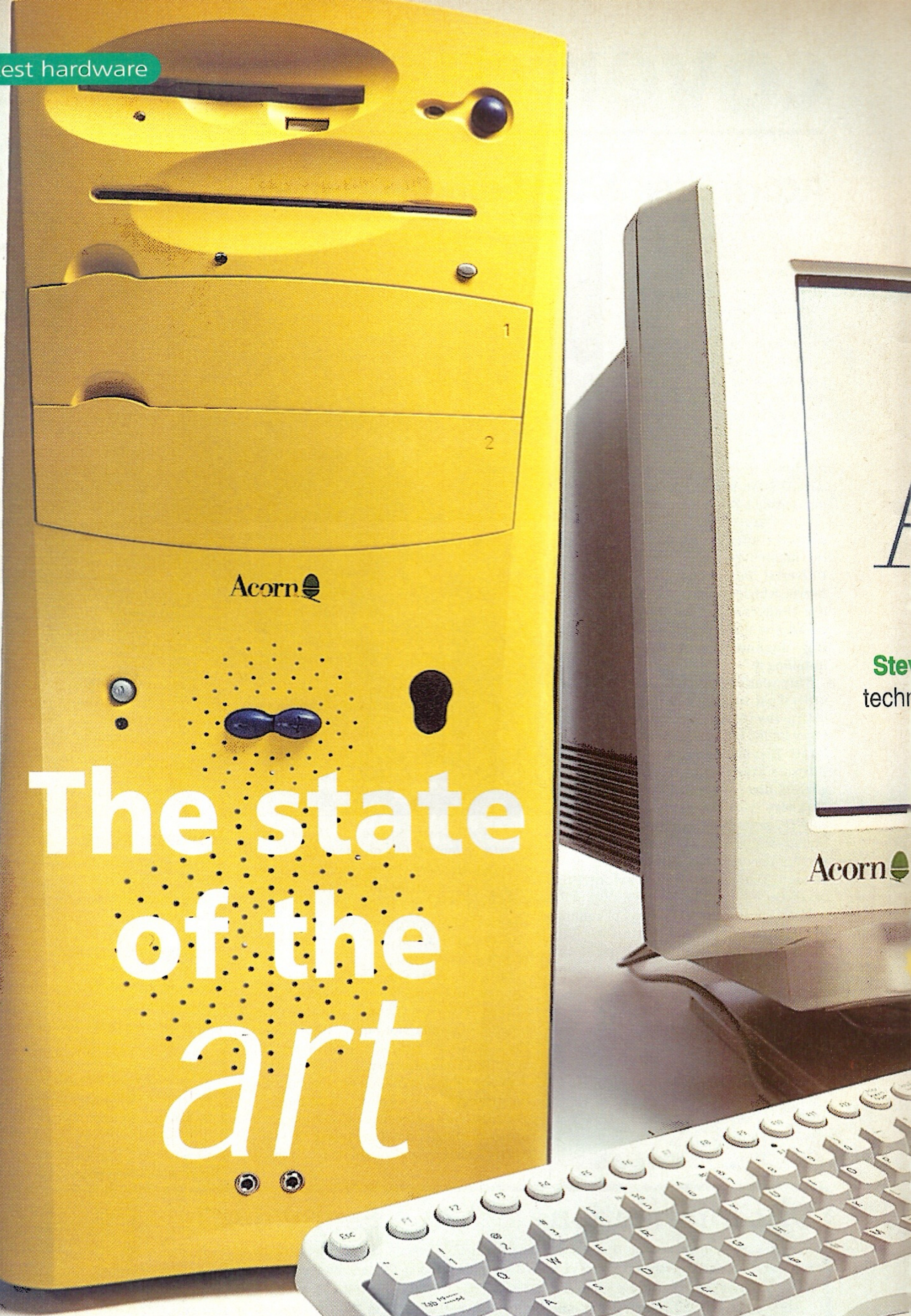
Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

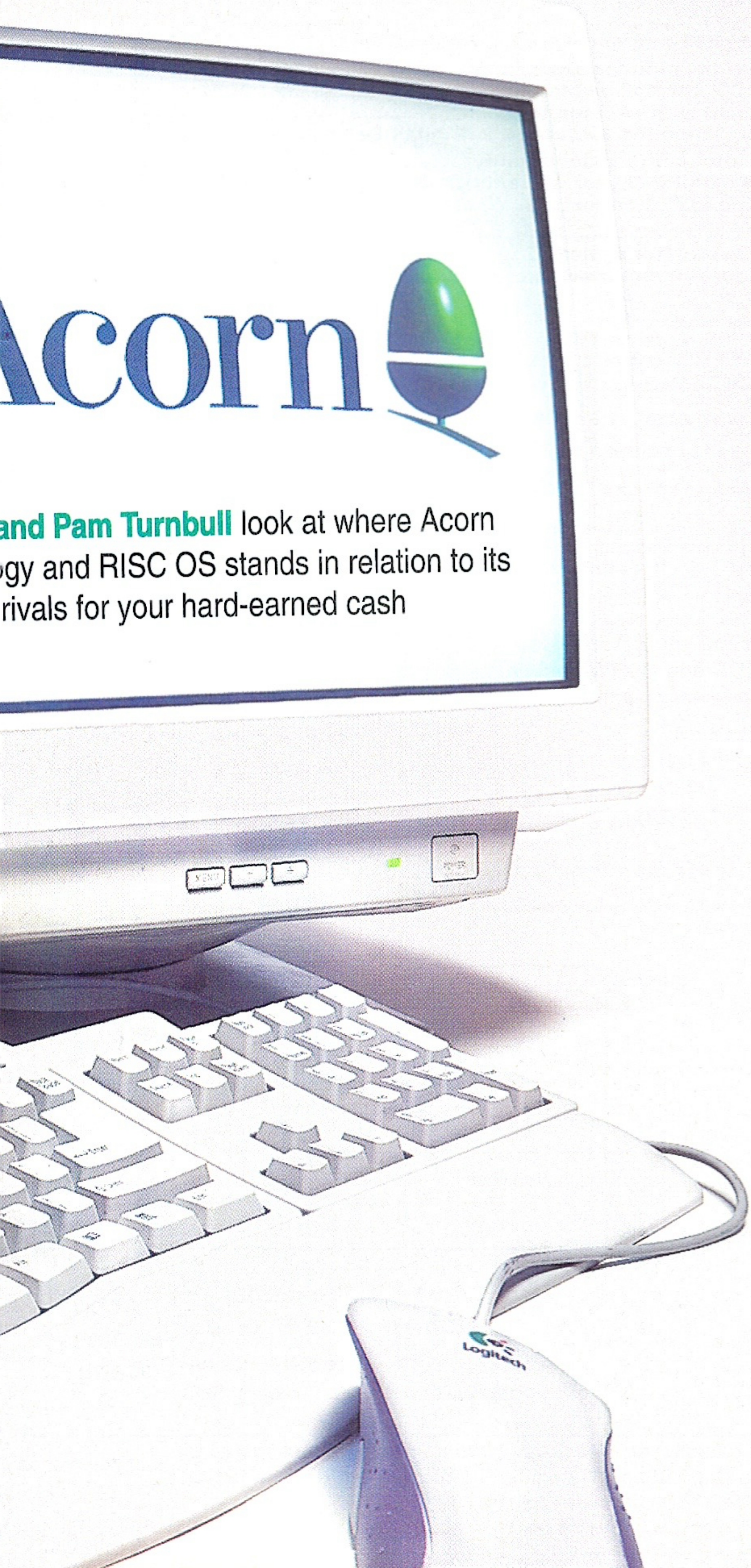
If it fails to verify or is physically damaged you should return it to *TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH.* If it verifies successfully return it to the *Acorn User* editorial office at the usual address.

The *Acorn User* cover disc has been checked for viruses using *Killer* version 3.001 from Pineapple Software

The state of the *art*


1
2
Acorn
Acorn

Stev
techn



and Pam Turnbull look at where Acorn
gy and RISC OS stands in relation to its
rivals for your hard-earned cash

Welcome to the season for new machines. Forget mellow fruitfulness and Harvest Festivals this is *the* selling period of the major hardware manufacturer and retailers and with troubles in the Middle East not promising to go away all that quickly there is a lot hanging on the Christmas' computer bonanza. True, Acorn is somewhat insulated from these shenanigans but no computer company is an island.

As this is our 200th issue, we have opened these illustrious pages to see what the Mac OS and Windows platforms have on offer and how RISC OS stacks up in a more global context. This issue we're tackling the look and marketing of these beasts as well as comparing the specification sheets computer bods love. In the Christmas issue we'll see the truth behind the numbers by putting the computers through their paces for speed and usability.

Grey boxes predominate although questioning of PC manufacturers will reveal that there are lot of shades of grey and 'we use much nicer ones these days'. Offices and schools care little about the exterior, it is productivity that matters, but all of us like a little style in our lives. The trouble is that people have different concepts of 'good' style. PCs play safe by keeping the nondescript colour and three box design – monitor, keyboard and processor unit – the occasional company playing with the keyboard or monitor shape.

Apple and Acorn have more lee-way as they are single manufacturers and this has resulted in two very *different* designs of the iMac and the Phoebe. The less charitable might say that this is because the operating systems of the three main platforms are none of them radically different. PCs have augmented Windows 98 with new software bundles, faster processors, bigger hard discs and even DVD, Apple and Acorn have better processor speeds too and though they don't have as many models as in previous years they have added style.

Power and flexibility

So does Acorn come out the poor relation? True, the Phoebe does not have the huge design budget of Apple behind it. Yet it has a style and look of its own. Not as complete a design as the iMac perhaps but infinitely better than the collection of grey boxes and peripherals which surround your standard PC. RISC OS is still the better operating system because of being situated in ROM and not taking huge chunks of memory before you even start working.

With the Phoebe Risc PCII, Acorn's aim is to bring the RISC OS machines in line with off-the-shelf PCs while being faster and more efficient on how it harnesses the strength and power of its processor and in particular to remove the bottleneck on the main memory bus.

The operating system has been tweaked rather than re-written with a new kernel to support the hardware with better task swapping, cached screens and so on as well as a new ADFS with even better IDE ➤

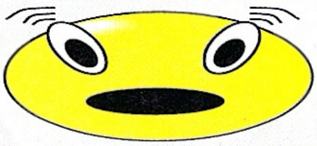
CUMANA
The best name in memory

The names you can trust for all your computer requirements.

CANNON COMPUTING

Acorn
Revolutionary Computers

With over 14 years educational experience you know who to trust



We supply the range of computers, A7000s, RiscPCs, Pocket Books and NetWork Computers (NCs).

		(Inc VAT)
A7000+ 8Mb HD1.7Gb with 14" monitor	905.00	1063.38
A7000+ 8Mb HD1.7Gb 32xCD with 14" monitor	947.55	1113.37
A7000+ 8Mb HD1.7Gb 32xCD with 14" monitor, 200 watt speakers & 2 Anglia CDs	999.00	1173.83
233MHz StrongArm RiscPC 4Mb HD1.7Gb with 14" monitor	1032.66	1213.38
233MHz StrongArm RiscPC 4Mb HD1.7Gb 8xCD with 14" monitor	1075.21	1263.37
233MHz StrongArm RiscPC 10Mb HD1.7Gb 8xCD with 14" monitor	1288.00	1513.40
233MHz SA RPC 10Mb HD1.7Gb 32xCD with 14" monitor, 200 watt speakers & 2 Anglia CDs	1339.45	1573.85
Upgrade 14" Acorn systems to 15" Optiquest monitor (3 year warranty)	(add) 25.00	29.38
Upgrade 14" Acorn systems to 17" Optiquest monitor (3 year warranty)	(add) 110.00	129.25
Upgrade 14" Acorn systems to High spec Iiyama 17" monitor	(add) 150.00	176.25
Phoebe - Base unit only	From only ✱ 1073.47	1261.32
Phoebe - 15" colour Iiyama monitor system	From only ✱ 1223.47	1437.57
Phoebe - 17" colour Optiquest monitor system	From only ✱ 1223.47	1437.57
Phoebe - Base unit only	normally 1499.00	1761.32
Phoebe - 15" colour Iiyama monitor system	normally 1649.00	1937.57
Phoebe - 17" colour Optiquest monitor system	normally 1649.00	1937.57

Phoebe RISC PC 2

✱ ***Save up to £500*** ✱ ***Limited Launch Offer, until 31st October 1998*** ✱

✱ This offer is limited to Acorn Clan & User Group Members. ✱ Clan membership costs a mere £15 - why not join today? Call us for full details!

Plus Digital Cameras, Software, Training, Extended Warranties, Networking. Etc.

FREE delivery on all Acorn computer systems.

We offer *extra discounts for Education* - Call us now for the most competitive value, high specification quote.

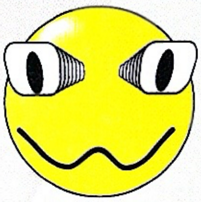
Whatever your needs or budget we can help with Leasing / HP / Educational accounts / Cheques or Credit & Debit cards.

Any customer who purchases a Phoebe from us will receive any relevant CUMANA product upgrades FREE.

See Page 92 for the latest Acorn User Reader Offer on CDR and CDRW packages

CD-ROM Drives - CUMANA

☆NEW☆



DVD (Digital Video Drives) on show at Acorn World (stand 40)

SCSI Drives starting from £399.00 plus VAT

2.6 GB media £14.95 plus VAT
5.2GB media (double sided version) £22.95 plus VAT

CD-R

REDUCED Price drives

!CDBlaze Software for the Acorn platform - This software supports CD-R / CD-RW and SCSI-3 MMC compatible drives - call for currently supported drives	79.99
CD-R Internal Panasonic 7502 SCSI drive & !CDBlaze Acorn software	299.00
CD-R External Panasonic 7502 SCSI drive & !CDBlaze Acorn software	349.00
CD-R blank discs (box of 10)	19.95

☆ Call for prices & specs of other makes of drive mechanisms ☆

Oscar Encore 24 speed CD-ROM Parallel external drive for Acorns & PC with bi-directional parallel port	169.00
Indigo 32 Speed CD-ROM IDE internal drives & CUMANA Acorn driver software for *A7000's and Risc PC's (after July '95)*	84.00

Printers

(including // cable, Acorn & PC drivers)

Hewlett Packard (HP) 690c+ colour inkjet	124.00
Hewlett Packard (HP) 690c colour inkjet (excludes photo real ink and case)	110.00
HP Deskjet 400L colour inkjet	82.30
HP 6L mono laser	236.00
QMS Magi*color*^{2} DeskLaser 600x600 DPI 8Mb ram colour laser	1795.00
QMS Magi*color*^{2} CX 600x600 DPI 24Mb ram colour laser	2299.00

Call for other makes, models and quantities.

Cumana 32Bit SCSI 2 CARD interface, as fast as any on the market
£149.00 +vat

Software Drivers *- or complete solution?*

!CDBlaze CD-R / CD-RW - driver for acorn	79.99
SyQuest EZFlyer, SparQ & SyJet - drivers for Acorn	(each) 60.00
Panasonic LF1500 6 speed Parallel PD - driver for Acorn	60.00

CENTRES OF TECHNOLOGY Acorn CENTRES OF TECHNOLOGY

Trade & Educational customers are welcome.

Please call for separate prices on both Acorn and Cumana equipment.

Acorn Business Centre

Call us now on Tel +44 (0)1279-730800/730900 Fax +44 (0)1279-730809. sales@cumana.co.uk.
Cumana is a trading name of : Cannon Computing, Whitegate, Dunmow Road, Hatfield Heath,
Bishop's Stortford, Hertfordshire, CM22 7ED. Partners: Nigel D. & Sara L. Cannon. AU/AWorld '98.
All Registered Trademarks acknowledged. Without Prejudice. All prices are UK £ sterling &, unless otherwise stated, exclude VAT and delivery. E&OE.

Phoebe

- **Price** – £1499 (but see news for discounts)
- **Operating system** – RISC OS 4.0
- **Processor and memory**
  233Mhz SA110 RevT
  64MHz bus speed
  32Mb RAM expandable to 512MB SDRAM
  5MB ROM
- **Graphics and sound**
  new VIDC20
  1024 x 768 x 16 million colours
  4MB EDO VRAM as standard
  Monitor optional
  Soundblaster compatible codec - stereo line in/out, headphones, microphone, hardware volume controls and waveblaster expansion
- **Storage**
  Internal 4Gb hard disc
  Internal 1.6Mb floppy disc (1.44MB PC read/write ability)
  E-IDE allowing 4 drives running 16Mb transfers
  32 speed CD-ROM drive
- **Interfaces**
  PC Style gameport – twin analogue joysticks and midi support
  2 serial ports (1 limited to software hand shaking)
  1 parallel port
  IrDA support
  3 standard podule slots
  4 PCI slots running 32-bit 33Mhz interface
  3 x 5.25 in bays, 2 x 3.5 in hidden bays and 1 x 3.5 in visible bay
- **Pre-loaded software**
  EasiWriter
  ANT Internet Suite
  Browse
  Organiser
  PCAPaint
  Iron Dignity
  Descent
  Ankh

interface. There's a better-looking desktop with a brand-new Pinboard that has taken ideas from the PD replacements, and there's an iconise button on the title bar now. There's a new *!Configure* which lets you add third party applications (though it should be used only for system-wide resources), the nested wimp (windows within windows) and true bubble help.

The new filecore lets you have up to 255 characters per filename – although other, unchanged, system restrictions won't allow pathnames greater than about 240 characters however this is unlikely to be a problem – and up to 80,000 files in a directory if needed, anyone with a directory approaching this number might find some disc utilities failing, but then again anyone with such a huge number of files in a directory probably needs to rethink their disc organisation. You can also happily upgrade to 128Gb of IDE drive, which should keep most people happy for a while – that's about 200 hours of MPEG audio/video.

Xemplar

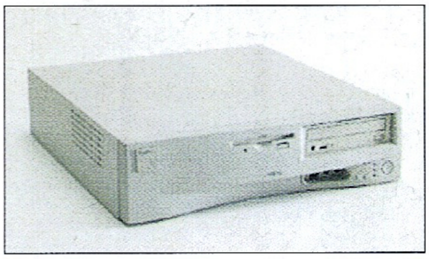
Xemplar of course will sell schools a PC (though only Fujitsu models), Macs and Acorns as part of a package or individually. Or how about a Phoebe, Fujitsu ErgoPro and a G3? The Mac and the Acorn allowing you to read/write PC discs as standard – and both networking easily with PCs – let schools augment their so-called industry standard with ease of use.

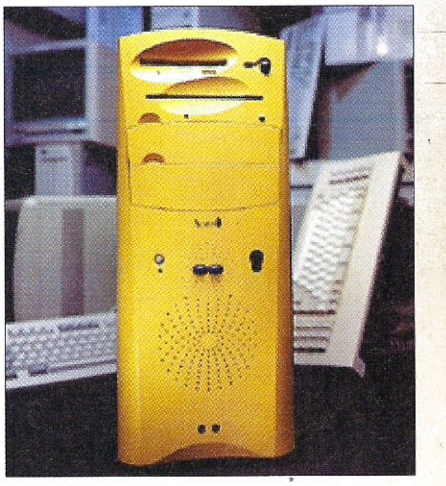
Acorn have been talking about multi-processor support – that is, the ablility to have more than one StrongARM running simultaneously. Well the hardware support for it is built-in to the Phoebe so we can look forward to it – 4x400MHz StrongARMs anyone?

Sound has also been improved using the 8-bit sound from VIDC20 with a new industry standard codec enabling MIDI sound, hardware volume control and software mixing of all sound sources including VIDC, Codec, line input and CD for versatility. Add a waveblaster card for real synth performance.

The software package *ReMIDI* is being packaged with the Phoebe so even if you don't have a MIDI hardware unit you can still get the benefits of some superb sound output.

On the software side Apps has been expanded to include *!EasiWriter* from Icon Technology (which means new users will actually have a decent word processor they can use from the word go) and *!PCAPaint*, this was written by Rob Davison who also wrote *!Compo* and was originally *NCPaint* that was bundled with the Net Computer, it has better features than the standard *!Paint* (which is still included) and allows any PCA-compliant application to edit a sprite in-situ without the need to export it to the paint package.





For a little light relief you can play *Descent* and *Ankh*. which are being bundled and for those who want intra-networking you also get *Access+*, *AccessCD* and *Omniclient* while one form of PC-compatibility is supplied in the form of the ICA Client software.

In this instance it's a case of "never mind the hardware, look at the software". In a total break from their previous behaviour Acorn have actually supplied the software necessary to use the machine, rather than just supplying the hardware and expecting the user to get his own software – a marketing attitude that went out with the Ark in other markets.

RISC OS 4 has been criticised in some quarters for not being sufficiently radical, but then what kind of radical is either needed or wanted? Basically we want a system that's the same only better, and that's what Acorn have given us.

For families, education and the Internet

Incredibly stylish and futuristic, the Apple iMac is promoted as the easiest way to whisk you on to the Internet and is aimed squarely at the home and schools. It comes complete with everything you need and as with all Macs provides an easy set-up – just plug and play. Plug in the power lead, insert modem lead, connect keyboard and mouse. One click and you're there. There's a 56k fax modem built-in and also 10BaseT Ethernet if you fancy having your own home Intranet, or want to plug it into an existing school network. This is all achieved incredibly easily and speedily. We were unpacked and connected to the office Intranet and Internet in five minutes.

But ... the Internet hasn't taken off in the UK home as in the US, mostly due to the fact that we haven't the benefit of free local calls. The iMac plays heavily on the Internet and indeed does make it all very painless even giving you the choice of three ISPs: BT Internet, Line One and Direct Connection. Whether this is enough to make the sceptical British public opt for the superhighway log-jam is to be seen – and there is a degree of ignorance about the ➤

Dell Dimension XPS R400 Tower

- **Price** – £1972.82 (inc VAT)
- **Operating system** – Windows 95 or 98
- **Processor and memory**
  Pentium II 400MHz
  64Mb RAM to 100Mb SDRAM
  512KB internal cache
- **Graphics and sound**
  8Mb Diamond Fire 1000 Pro GL graphics card
  Turtle Beach Montego PCI sound card
  17in monitor
- **Storage**
  11.5Gb hard disc
  Zip drive
  32-speed Toshiba CD-ROM drive
  1.44Mb floppy disc drive
- **Interfaces**
  3 PCI
  1 ISA
  1 PCI/ISA Shared
  1 graphics processor expansion slot
- **Communications**
  56.6 Kbpps Sportster fax/modem
- **Pre-loaded software**
  Microsoft Office 97 Small Business Edition

Internet which is frightening. The colour and shape you love or hate. Personally I love the design, and the fact that even the mouse ball is two-toned says a great deal about Apple – the number of staff and the amount of money they to have to play with!

But no design is perfect, so what about downsides? The function keys on the keyboard look and feel like last minute additions and we have a split judgement on the round mouse. While some people love the feel and response, others found that the circular shape meant that they could start using it off centre.

Mac OS 8.1 has menus which stay down when clicked and has a great 3D look but Apple purists will hate the more PC-look and behaviour of the windows but arguably it's a similar step to the one Acorn have taken with iconisation. Apart from that there are no real breakthroughs just tweaks and additions some of which have been available in the public domain for a while.

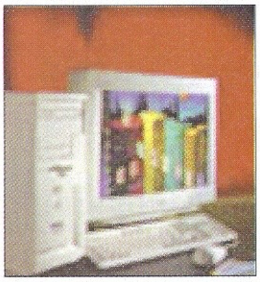
The integrated speakers, CD-ROM and microphone and even the trapdoor for the leads shouts good design. But somewhere along the line it was decided to do away with the floppy disc. Now you can add a Universal Serial Bus floppy drive if you need one but as the vast majority of Mac software comes on CD-ROM it is arguable whether you'd need one – work files can be transferred between machines using Internet or Intranet. Which brings us back to the argument, would UK users want a machine that only allows data transfer by Internet?

The basic memory is 32Mb, 16.9Mb of which is used by the operating system on start-up. If you plan to do anything expand. If you plan design work its maximum 128Mb RAM probably isn't enough.

The USB ports also limit you to a choice of peripherals, although Apple tell us that 200 new devices have been launched since May including low-cost printers, disc drives, scanners, cameras, and game controllers. What is more you plug these in without having to switch off and restart. Not as expandable or flexible as the Phoebe, it has a tighter marketing brief. With a retro feel it will match your Dyson vacuum cleaner and be a talking point for friends and neighbours with looks pricier than its £999 price tag.

Grey boxes

Enter the field of the workaday PCs which just get bigger. Here the principles of supply and demand come into play. The prices vary dramatically between systems, not just due to the basic box but down to maintenance contracts, and bundled software. You try buying a PC without software – great for first-time buyers but essentially irritating for upgraders. You pays your money and takes your chance/choice.



Though Windows 98 isn't perfect and there are still problems with some graphics drivers for instance, this is essentially an upgrade but it makes significantly more demands of memory and hard disc space. What makes the difference is the number of machines and packages on the High Street, and though significantly less pretty that the Mac and less internally stylish than the Acorn the sheer force of numbers will make the difference as users expect networking to be difficult, upgrading being a major chore and that anything that doesn't eat 60Mb of memory and hard disc space isn't worth giving room to. AU

i-MAC

- **Price** – £999 inc VAT
- **Operating system** – Mac OS 8.1
- **Processor and memory**
  233Mhz PowerPC G3 processor
  66Mhz system bus
  Integrated floating-point
  32MB of SDRAM, 2 SO-DIMM slots support up to 128MB
  64-bit memory bus
- **Graphics and sound**
  2MB SGRAM video memory, supports up to 6MB via SO-DIMM slot
  1024x768 (16-bit) resolution, 800x600 (24-bit) resolution
  Built-in ATI RAGE IIc accelerated 2D and 3D graphics chip
  2 built-in stereo speakers with SRS surround sound
  Built-in microphone
  2 front headphone jacks
  Mini-jacks for 16-bit CD-quality stereo input/output; 44.1kHz sampling rate
- **Storage**
  Internet 4GB IDE hard disc
  Internal 24-speed CD-ROM drive
- **Interfaces**
  2 Universal Serial Bus (USB) ports
- **Communications**
  Built-in 10BaseT Ethernet connector
  Built-in 56 Kbps fax/modem
  Infrared port (4 Mbps IrDA)
- **Pre-loaded software**
  ClarisWorks 5.0
  Microsoft Internet Explorer 4.01
  Netscape Navigator 4.0.3
  Microsoft Outlook Express 4.01
  FaxSTF
  MetaCreation Corp's Kai's Photo Soap
  MDK from Interplay Productions
  Pangea Software's Nanosaur
  Edmark's Sammy's Science House &Thinkin' Things II

USB Devices

The concept is that when you buy a peripheral for your computer you don't want to have to bother with switches, settings, DMA channels and the like. Developed by Intel among others the USB eliminates the need to add cards, open the computer or worry about how long your SCSI daisy-chain is getting - you can plug up to 127 devices into the USB.

Installation is automatic and you don't have to turn the machine off first. The promise is that the different connectors at the back of your computer will be replaced by one standard USB connector. Connecting cables have only four wires so are less bulky and the USB provides 5 volt power to attached devices doing away with adaptors. If you run out of USB sockets, additional peripherals connect into an expansion hub built into the keyboard or into a separate USB expansion box.

6 reasons why ArgoNet are the best:-

1st Get Online Pack

This special offer gets you online for the first THREE MONTHS to ArgoNet for only £24.95 including access software, if required, for Windows, Acorn or Mac.

2nd Get Connected Pack

An award-winning pack containing external 33.6K voice/fax/data modem and access software for Windows, Acorn or Mac. With THREE MONTHS online to ArgoNet the complete pack is only £79.95.

3rd Surf at Speed Pack

Complete with external 56K voice/fax/data modem, access software for Windows, Acorn or Mac, stereo headset and THREE MONTHS online to ArgoNet. Only £109.95.

4th SuperSurfer Pack

Contains everything needed - 128K external ISDN terminal adaptor, access software for Windows, Acorn or Mac and THREE MONTHS online to ArgoNet for only £199.95.

5th Modem Trade-in Deal

ArgoNet accept any modem, working or not, in part exchange for a new external 56K voice/fax/data modem. The K56flex modem with stereo headset and lifetime guarantee is £99.95 without a trade-in or with a trade-in is only £79.95.

6th ArgoSphere for Children

ArgoSphere is ArgoNet's award-winning Web site designed for children aged 3 and older to use offline. This safe site, containing a wealth of educational activities for home and school use, can be explored FREE at www.argosphere.net.

ArgoNet Internet Services

ArgoNet's Premier Service for home and business users includes 10Mb Web space and 5 e-mail addresses. For schools, the Education Online Service includes a free school domain, unlimited Web space for your school's use and unlimited e-mail addresses.

A subscription to ArgoNet includes full use of ArgoSphere the award-winning Web site for children, unlimited access with 100% local call coverage and free phone support. Subscriptions for dial-up modem or ISDN access are available monthly, 6-monthly or annually from only £10 (exc. VAT) per month.

for the 7th call free phone:

0500 585 586

for friendly help, information and to order

winners

of a
BETT'98 INTERNET AWARD
& PC Guide 1997 Award for
THE BEST MODEM
of THE YEAR

ARGO net
THE INTERNET EXPERTS

Argo Interactive Group plc,
FREEPOST PT795, Chichester, PO19 2YZ
e-mail: info@argonet.co.uk web: www.argonet.co.uk

Prices include VAT, UK carriage & packing, unless stated otherwise. E&OE

A Revolutionary
way to save
£500

On a

Phoebe
RISC PC 2

Put a £ 100 deposit down get £ 100 OFF
Put a £ 200 deposit down get £ 200 OFF
Put a £ 300 deposit down get £ 300 OFF
Put a £ 400 deposit down get £ 400 OFF
Put a £ 500 deposit down get £ 500 OFF

e.g. Base system RRP £ 1761 less Deposit £500 with Discount of £ 500 would leave £ 761 to pay

Offer open until 31.10.98 & To members of an AAUG user group or the Clan Only (Clan membership £15 if req.)
Maximum Discount £ 500 for clan members £ 400 for User Group members
Customers with Existing Orders automatically get £100 off and can increase deposit to get above Discounts
Phone for details of Acorn's new 'Buy now pay later' scheme

Roland Sound Canvas SC88 Pro for a great Midi Sound Output **£ 569**

Canon BJC 4300 Colour Printer £ 160

A4 Flatbed Scanner Parallel Plustek Optic Pro 600x300 optically **£ 140**
Inc Imagemaster and Twain Driver

17" Iiyama Pro Monitor 0.25ag New Model New Lower Price **£ 390**

19" Iiyama Monitor 0.27mm New Lower Price **£ 560**

32MB RAM SIMM **£ 40**

64MB RAM SIMM **£ 120**

5.1GB Quantum Fireball Hard Disc £ 180

New A7000's 8MB from £ 400 --- S/H A5000's 4MB £ 350

CJE MICRO'S & ncs
NORWICH COMPUTER SERVICES

All prices **INCLUDE** VAT @17.5%
Official Orders Welcome

CJE Micro's
78 Brighton Road
Worthing
West Sussex
BN11 2EN
Tel : 01903 523222
Fax : 01903 523679
email : sales@cje.co.uk
web : http://www.cje.co.uk

Ver42 80904

Phoebe
Acorn
1
2

WIN A

Phoebe RISC PC 2

We've got a Phoebe, courtesy of Acorn, to give away to one lucky reader. All you have to do is answer the two questions below and send back the completed entry form. Closing date for entries is 30 Nov. 1998

ACORN USER
MAZE GAME

Phoebe competition entry form

1. Which issue of *Acorn User* is this?

○ Issue 50
○ Issue 121
○ Issue 170

2. What was the message you would be faced with if you tried to deprotect an original BBC Model B Elite disc?

○ This computer will blow up in 10 seconds
○ Wait 'til your father gets home
○ Does your mother know you're doing this?

Name ....

Address ....

....

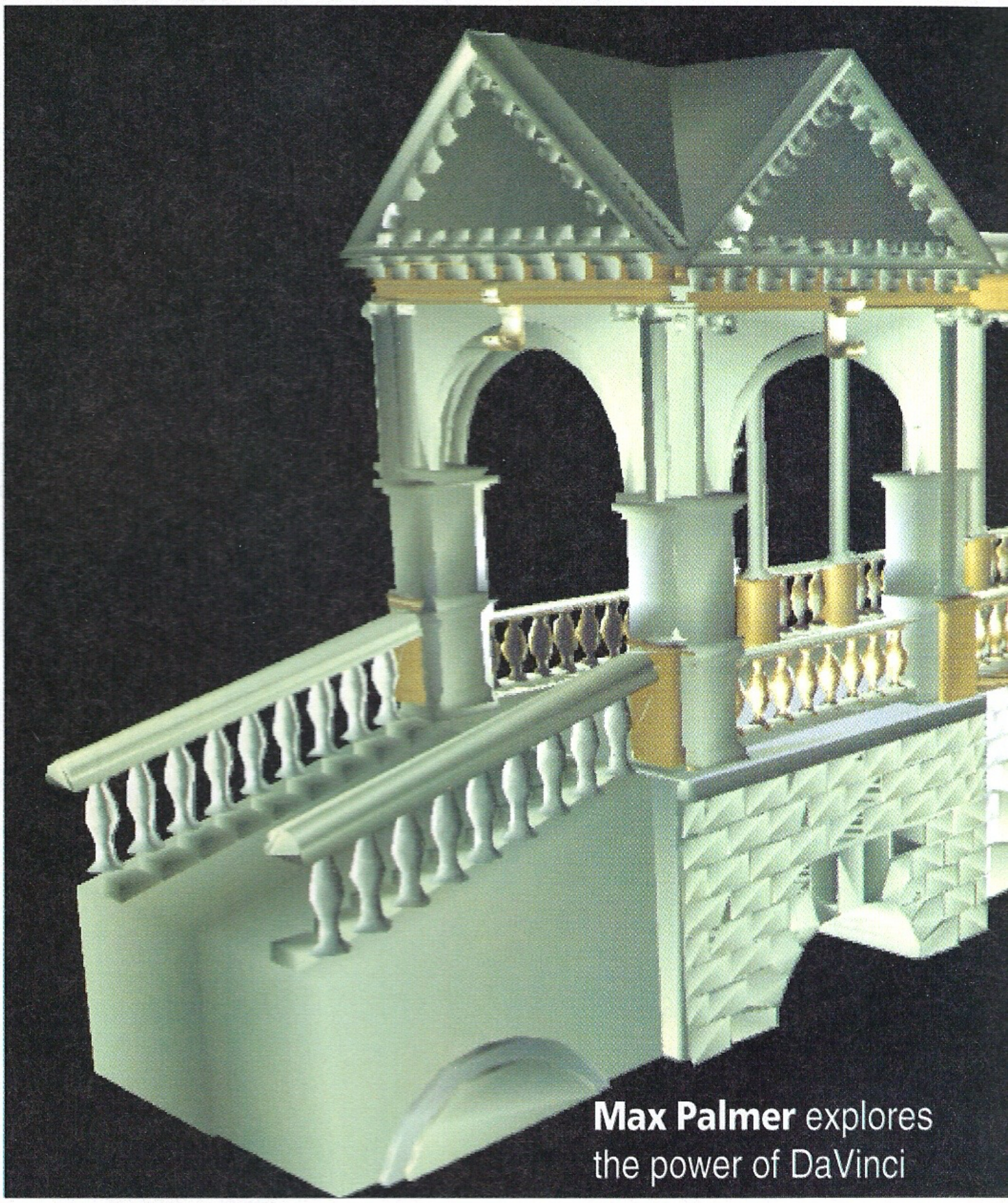
Postcode .... Tel..

Send your entry to *Acorn User* Phoebe Competition, IDG Media, Media House, Adlington Park, Macclesfield, Cheshire, SK10 4NP

I am a current *Acorn User* subscriber ☐ Yes ☐ No
I am a member of the Clan ☐ Yes ☐ No
I would like further information about the Clan ☐ Yes ☐ No
☐ Please tick if you do not wish to receive additional promotional literature

Closing date for entries is 30 November 1998
The editor's decision is final

* If you win this competition and have pre-ordered a Phoebe you will get your money back



Max Palmer explores the power of DaVinci

Figure III : The completed model

Hopefully, my last article on *TopModel* prompted a few of the more persistent among you to reach for your mouse and fire up that old 3D modelling package you always thought was too difficult to use. This month, we will be attempting to recreate a more classical form of architecture using Aspex Software's three-dimensional modelling package, *DaVinci 90*.

My inspiration came from the National Trust calendar that once in a while crests the waves of paperwork that crowd around my Risc PC. The model is loosely based on the magnificent Palladian bridge which graces the landscaped grounds of Stowe Gardens, in Buckinghamshire.

Unfortunately, the Easter floods which took much of the Midlands by surprise, happened to coincide with my quest for photographs and turned my attempted visit into an impromptu white-water rafting adventure. So apologies to all – I am unable to provide any photographs of the real McCoy.

DaVinci 90

As seems to happen often in the Acorn world, *DaVinci* arrived at roughly the same time as *TopModel*, its closest Acorn-based competitor. As a result, many Acorn users who had been eagerly awaiting an easy-to-use 3D package were forced to choose between the two applications.

Those of you who still have to make that choice should look to the back issues for detailed reviews of the packages. However, it is safe to say that *DaVinci* and *TopModel2* are sufficiently different in both style and complexity to have etched out niches of their own, and in many respects the two packages provide a complementary approach to modelling. Indeed, it should be possible to transfer geometry data between the two applications, in an albeit somewhat basic form, using the industry standard DXF format. Although I have to admit that I was unable to persuade the *TopModel* export utility to convert a *TopModel* file into a DXF file – so check with Sincronia if you really need this facility.

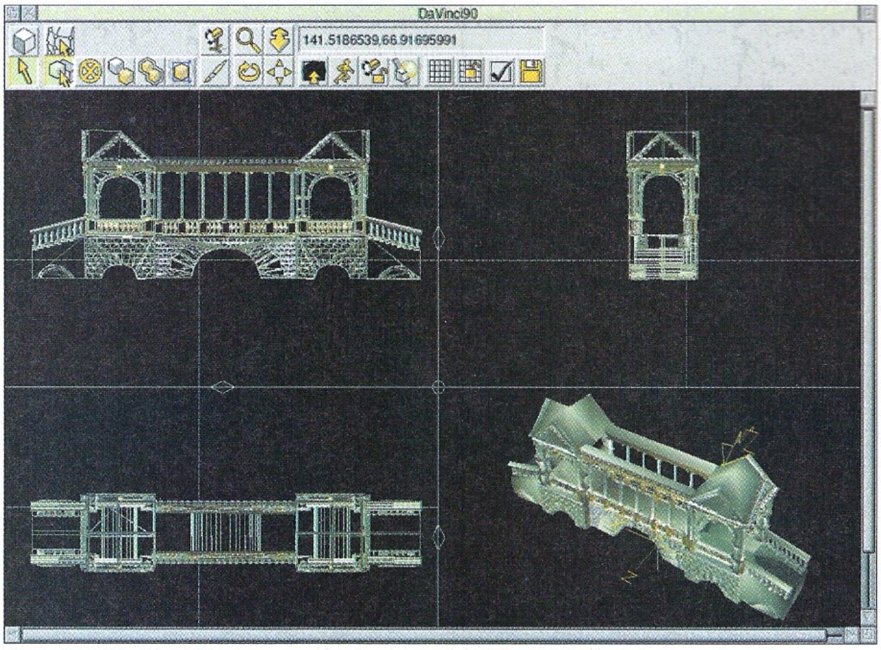
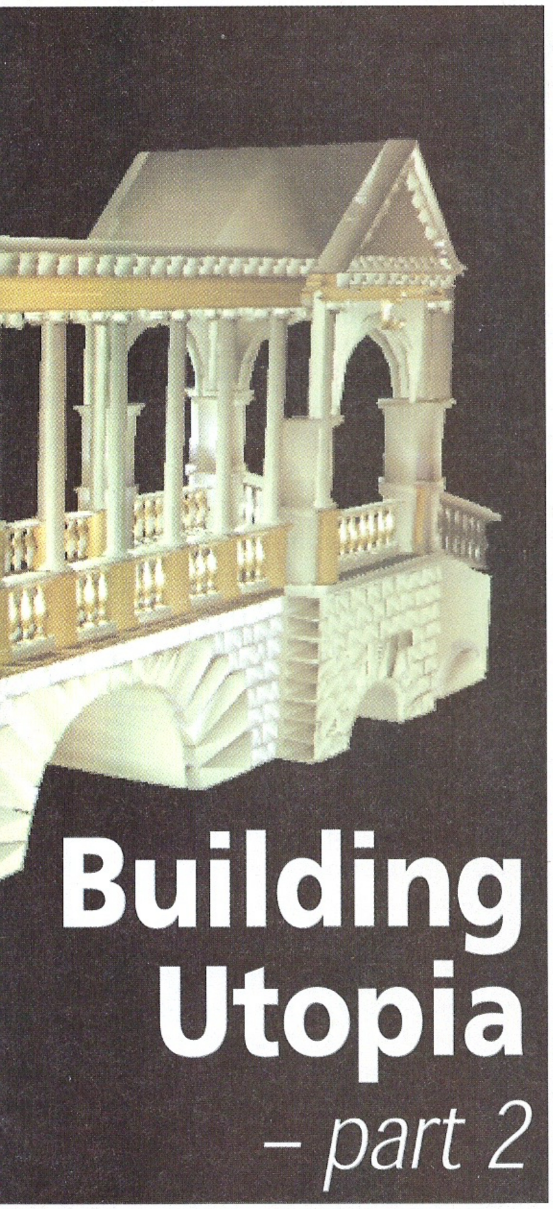


Figure I : DaVinci in action

The workspace

The first thing that strikes you about *DaVinci* is that it adopts a conventional approach to model design, with the main window split into four quadrants (Figure I). Three of these quadrants are taken up with a plan view and two elevations, while the fourth gives you a shaded, three-dimensional view of your model, allowing you to see what's really going on.

It is possible to alter the orientation, scale factor and 'origin' of the three wire-frame views, which adjust as a set to retain their orthogonal nature, by selecting the appropriate tool from the toolbar. However, unless you have a real need to do so I would advise you to stick to the default orientations since anything else



Building Utopia

– part 2

makes editing unnecessarily complicated for most purposes.

I have to admit that my initial reaction to the three orthogonal views was one of frustration since I felt cramped by the lack of workspace when working in one of the views. However, Aspex have cleverly provided a small zone in the centre of the splitter window which allows you to adjust the relative size of the four views.

Using this feature you can make one of the panes dominate the main window and hey presto – no more workspace problems! Indeed, once you get used to this feature you'll find it becomes invaluable for checking the relative position of an object in all three orientations before you move on to create something new. A virtual navigation mode is also available for viewing the model in 3D, should it be required. This takes over the whole screen and is excellent for admiring your handiwork.

Object handling

Compared to *TopModel*, *DaVinci* might lack some of the more esoteric tools for creating objects, nevertheless, facilities for constructing all the basic primitives are present and can be accessed via icons on the design toolbar.

Rather than explain the function of each of the tools in the text, I have created a diagram which, to use a pun, I hope is worth a thousand words, and provides an illustration of the kind of shapes you can produce with a few mouse clicks (Figure II).

As before, I strongly urge you to spend a few minutes playing around with each of the tools so that you can build up an understanding of what each is capable of. Also explore the action of the menu parameters which can be accessed by clicking the middle mouse button when the pointer is present over the relevant tool on the toolbar.

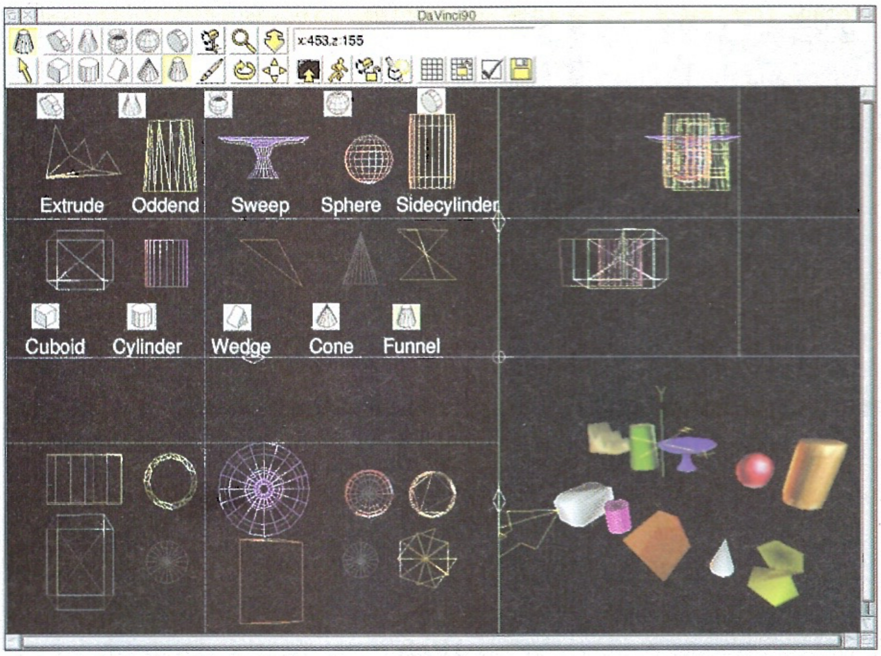


Figure II : The basic design tools in action

DaVinci adopts what is at first hand a rather unusual, sequential approach to creating a new object. For example, to create a box you have to follow the following series of predetermined steps:

- Firstly, click somewhere in the chosen view pane to fix one corner of the box.
- Next, move the mouse in the view pane and click to fix the position of opposite corner.
- The view now adjusts to show you a 'thin' version of your object in the depth plane. You then move the mouse to adjust the position of one end of the box in the depth plane. Once again a mouse click fixes the position.
- Finally you can move the mouse to adjust the length of the box, 'rounding' off the object (metaphorically) with a final click.

While this type of method is fairly easy to follow for basic shapes, the procedure for creating some of the more unusual objects takes a little getting used to and often a few attempts are required to create what is really wanted. This is not meant as a criticism, however, it does add weight to the argument that the best way to make progress with packages of this type is by exploring rather than by launching straight into a design.

Once an object has been created it may be selected using the mouse. This will bring up an blue bounding box, rather like the one in *Draw*, which allows the object to be scaled, translated, copied or rotated. If, like me, you are rather hopeless at making these kind of critical adjustments by eye, you can opt to type in values for the overall magnification, width/height scale factors and rotation angle by filling in the edit fields accessible via the main menu.

More than one object can be selected and manipulated by either of these methods or alternatively the objects may be grouped together to provide a more convenient way of selecting a 'master shape' at a later date. While you might think such actions are unnecessary, it is well worth getting into the habit of grouping objects constructed from smaller shapes once they are considered complete, since failure to do so at an early stage can lead to intense frustration later on, by which time the scene has usually become considerably more complex.

Finally, you can select the type of material to be applied to the group or an individual object using the paintbrush icon. Unfortunately, *DaVinci* does not support texturing, the options available are therefore limited to setting the colour and basic properties of the chosen material such as the reflectivity and transparency.

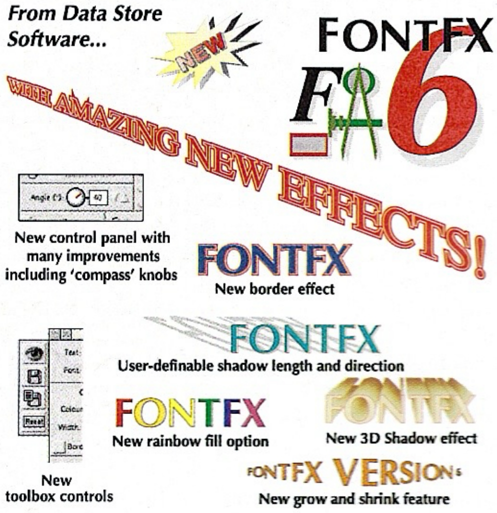
In addition to object selection, *DaVinci* allows vertices to be selected and moved using the mouse, provided the appropriate mode has been engaged on the toolbar. This feature can be used to tweak or distort objects and allows minor mistakes to be

➤

THE DATA STORE

15th Anniversary Year

From Data Store Software...


NEW
FONTFX 6
WITH AMAZING NEW EFFECTS!
Angle
New control panel with many improvements including 'compass' knobs
FONTFX
New border effect
FONTFX
User-definable shadow length and direction
Text:
Font:
Colour
Width:
Reset
Bord
FONTFX
New rainbow fill option
FONTFX
New 3D Shadow effect
FONTFX VERSION 6
New grow and shrink feature
New toolbox controls

NOW AVAILABLE!

PRICE £31.95 inc.VAT and postage

SITE LICENCES AVAILABLE

Upgrades at special prices for owners of earlier versions: phone for details

Place your order for the latest, greatest Acorn Computer NOW and DOUBLE YOUR DEPOSIT FOR FREE!

Phoebe
RISC PC 2

A minimum £100 deposit paid now puts your name into the queue for delivery from November. Clan/AAUG members can leave up to £500/£400 deposit to obtain a matching discount! For example, Phœbe price £1750 – deposit £300 – balance to pay only *£1150* (£1750 less £300 deposit less £300 matching discount). *Plus* our own launch offers, to be determined nearer the time. So *place your order NOW!* Can you think of another guaranteed way to double your investment in just a few weeks?

SPECIAL OFFERS

IDE hard discs for RiscPCs and A7000s

3.2GB	*£115*
4.3GB	*£130*
6.5GB	*£159*

Epson scanner bundles...

GT5500 (SCSI) £299

including ImageMaster/TWAIN for Acorn and separate software for Windows.

SIMM DRAM (RiscPC/A7000)

16MB	*£20*
32MB	*£38*

Plus Zip Drives, SCSI cards, MIDI interfaces, CD-ROM drives, printers and monitors, all at competitive prices!

Sibelius Software SPECIALISTS

***LOWEST EVER* PRICES!**

Sibelius 7 Professional v3.5 ~~£999.00~~
NOW FURTHER REDUCED TO JUST £625.00!!

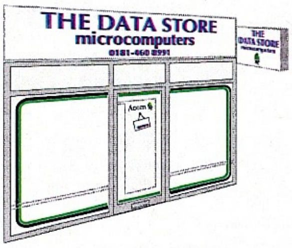
Sibelius 7 Student v3.5 ~~£581.62~~
NOW FURTHER REDUCED TO JUST £325.00!!

*Sibelius 6 v3.5 ~~£210.33~~ **NOW £105.00***

PLUS...

Scan your printed music straight into Sibelius with ***Optical Manuscript* *£275.00***

The Data Store is one of only three dealers in the country which offer full, detailed demonstrations of Sibelius software. If you want to find out how the best just got better, ring us **NOW** for an appointment - you'll need at least an hour!


THE DATA STORE
microcomputers
0181-460 8991
THE DATA STORE
Acorn

The Data Store is proud to have served the Acorn community for over 15 years, from the days of the BBC Micro and the Electron right up to the forthcoming 'Phoebe Risc PC 2'. If you're in the Bromley area, just 10 miles south-east of central London, why not visit our well-equipped showroom? If not, our mail and telephone order service is second to none. *If it's made **by** Acorn or **for** Acorn, we can supply it, and at competitive prices.* Come and join our ever-growing family of satisfied customers!

We're a member of the ***ACORN SOFTWARE NETWORK***.
See our double page advertisement elsewhere in this issue for a listing of just a selection of the available software!

OPENING HOURS

	AM	PM		AM	PM
Monday	9:30	5:30	Thursday	9:30	5:30
Tuesday	9:30	5:30	Friday	9:30	5:30
Wednesday	Closed	Closed	Saturday	9:30	5:30

6 CHATTERTON ROAD BROMLEY KENT BR2 9QN
Tel 0181-460 8991 • ***Fax*** 0181-313 0400
Web http://www.datstore.demon.co.uk/
Email info@datstore.demon.co.uk

ALL PRICES IN THIS ADVERTISEMENT INCLUDE VAT @ 17½%

Don't forget, the future's yellow...!

➤ removed with relative ease. Once you are happy with your scene you can save it in its native file format or export it as a DXF file or VRML model.

The latter is useful for placing designs on the Web, while the former is a good bet if you want to load your geometry into another 3D package. In addition, scenes can be saved as sprites or *Draw* files, allowing your designs to be integrated into documents or included as part of a presentation.

While the above has hopefully provided an indication of how *DaVinci* works, I must stress that I have not covered all the features that are available. However, space is at a premium, so I shall press on with the tutorial. I can only urge you to take time to explore. It really is the best way of making the most of packages of this type and will reap rewards in the end.

Palladian dreams ...

Few of you will have got this far without having already glanced at the figures that accompany this article. However, if you have managed to resist the urge to do so, now is the time to relent and cast your eyes in the direction of the final image. As you can see, the aim of this month's tutorial is to create a model of a rather impressive looking bridge. So, how is it done?

As I stressed last time, virtually everything around us can be broken down into a collection of smaller objects which themselves are composed of even simpler shapes. Therefore, by applying the reverse argument we can say that in principle it is possible to construct fairly complex looking structures using only a few simple tools which allow us to create a number of basic shapes.

OK, this is a bit of a generalisation, however, it is certainly true of many man-made structures like the bridge shown in Figure III, which is in fact composed of no more than a few basic building blocks, such as columns, bricks, plinths and balustrades.

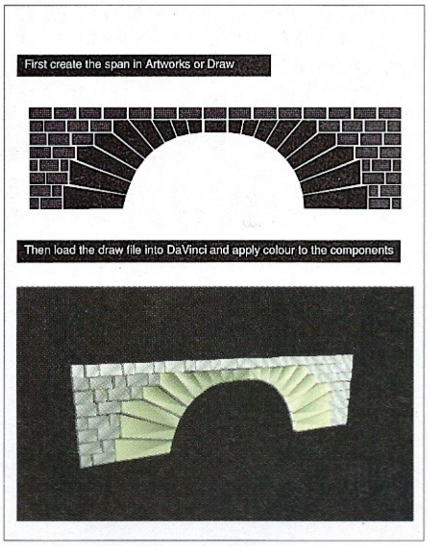

First create the span in Artworks or Draw
Then load the draw file into DaVinci and apply colour to the components

Figure IV : Building the foundations.

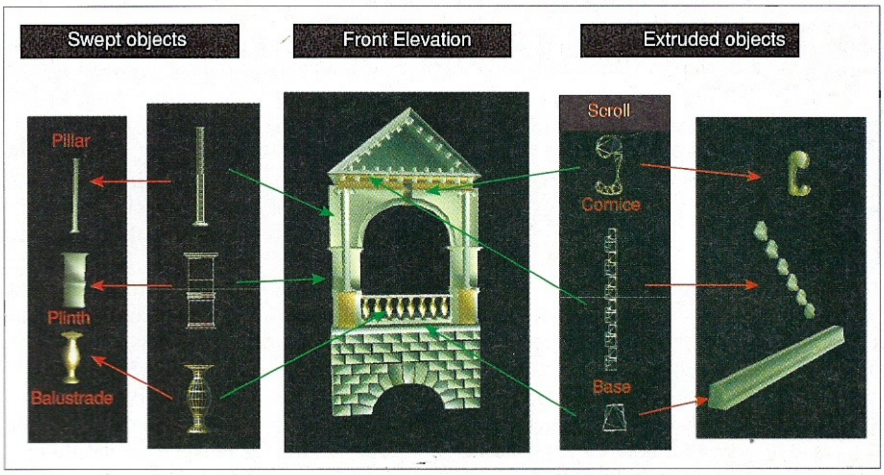


Figure V : Creation of the basic building blocks using the sweep and extrude tools

The key to producing a seemingly complex model like the bridge, therefore becomes that of finding a method of constructing these simple shapes. The rest is just a matter of patience while you clone the results using the copy, translate, scale and rotate tools.

To start with, I analysed the photograph of the bridge in an attempt to break it down into a number of objects which I believed could be constructed with relative ease, looking for places where I could apply symmetry to make life easier. I then picked a convenient place to start (something which provides a good indication of the eventual scale of the object) and tried to think how I might go about creating the first part of my model. In this case the base of the bridge.

Fortunately, *DaVinci* is blessed with a quite superb *Draw* file import filter which is able to triangulate almost any shape you throw at it, turning them into extruded three-dimensional objects. Given this immensely powerful feature, I set about copying the basic design of the base in *Artworks* and then loaded the exported *Draw* file into *DaVinci* – simplicity itself.

All I needed to do once the file was loaded was to group the shapes and then scale the depth of the group until I was happy with the overall dimensions. Hey presto – one section of the base completed. I repeated this procedure to create the central span and applied the appropriate colour to the bricks to obtain the model shown in Figure IV.

Raising the stakes

Once the base had been constructed I set about creating a few of the basic objects I would need to construct the front elevation of the left-hand tower. Note that symmetry is on our side here – all we need to do is to create the front elevation since the rest of the structure can be built up by selectively copying, rotating and positioning the front elevation. Figure V provides a breakdown of these building blocks, which I will now explain how to create in turn. Amazingly, they can all be created using just the sweep and extrude tools.

Using the sweep tool

The great thing about creating radially symmetric features like the balustrading is that the results look very impressive, but in actual fact take very little work to produce. All you need to do is to draw the profile of the object you require and the sweep tool does the rest of the work for you.

Rounded objects like the columns can be produced by specifying a large number of steps in the pop-up menu, while more angular objects, like the plinths, can be produced by reducing the number of steps to four (see the menu option produced by clicking on the toolbar).

Once you are happy with the basic result, the object can be rotated and scaled to produce a more elongated feature, as was necessary with the darker plinths positioned at the base of the columns.

Using the extrude tool

The extrude tool is perhaps the most powerful tool in the 3D modeller's armoury. We have already seen it in action when we imported a *Draw* file into *DaVinci* to create the base of the bridge. However, it's just as easy to create an extruded object in *DaVinci* directly, using the extrude tool on the toolbar.

As with the sweep tool, all we need to do is to draw the outline of the object and then scale the dimensions of the resulting shape to obtain the required depth. Once this has been done the object can be copied, rotated and shifted into the correct position. Multiple copies of the object can then be used to create features like the 'cornice' which appears round the edges of the roof. A few examples of extruded objects are shown in Figure V.

Hints and tips for a happier life

While most of the work required to create the front elevation is just a matter of cloning and manipulating objects, there are a few measures you can adopt which can make life a lot simpler.

- Firstly, position objects at the origin before you manipulate them. This avoids ➤

the need to go hunting for an object following the application of a scale factor or rotation angle.

- Secondly, use the group tool once you have finished constructing a feature from a collection of primitives. This makes copying and selecting other objects much easier when the scene becomes more complex.
- Thirdly, save, save and save again. *DaVinci* has no undo feature and it is **very** easy to wreck a drawing by selecting the wrong object at the wrong moment. To prevent a disaster ruining your day adopt incremental filenames and save regularly. This strategy saved me a lot of time during the creation of the Palladian bridge and is a good substitute for an undo buffer.
- Create complex scenes in sections and then construct the final scene from these individual files. Although *DaVinci* is pretty nippy, even a StrongARM machine has problems redrawing a 7Mb file, so maximise your efficiency by splitting complex models into manageable chunks.
- Scale your scene so that it looks right when perspective is applied. If you find that the images you have lovingly created look a bit odd when you switch to the full screen view you are probably using the wrong scale factor. Try reducing or increasing the overall scale until you are happy with the results.
- Finally, you may find that some of the objects look decidedly odd when viewed as a shaded model. If this happens, select the offending object(s) and apply the *Invert Polys* or *Double Sided Polys* option from the *effects* menu. If things improve then your original problem was probably due to some of your polygons (facets) 'facing' the wrong way.

These tools correct for this 'feature' by reversing the direction of the polygon and/or cloning the polygon so that it has a back and a front face. If you want to know more about why such problems can occur then I recommend you read the series on creating a three-dimensional graphics engine which appeared in *Acorn User* earlier this year.

Ramping up to the end

By now you should have a pretty good idea of what you need to do to create the front face of one of the towers. All that remains to be done in order to create the complete tower is to clone the objects twice, rotating by 90 degrees round the z axis each time, and position the copies so that the vertical (z) axis is aligned with the central axis of the tower. Finally, ungroup the cloned group at the far end of the bridge and delete the balustrading. This process is shown in Figure VI.

The upper portion of the central section of the bridge can be created by cloning more of the basic objects used to create the tower. These should then be copied, in groups, to produce a series of identical sections. Once you have completed the front face, group and clone the objects (again – ahem!) and rotate the copy by 180 degrees before positioning it onto the opposite side of the bridge.

The last section of the bridge to be constructed, namely the ramp, was created by importing a *Draw* file which contained a collection of shaded objects. These were subsequently scaled and positioned so that the smaller objects stood proud of the main body of the ramp. Yet more balustrading was added using the sweep and extrude tools and the vertices shifted to create the slowly rising handrail. Finally, the feature was copied, rotated and positioned to complete the model.

Summing up

While I feel that *DaVinci* is not as comprehensive a package as *TopModel*, I have found it to be perfect for getting to grips with the basic fundamentals of three-dimensional graphics. It is therefore a valuable tool for those who are looking for an introduction to modelling, but who cannot justify the extra features or expense of *TopModel*.

It is not unsurprising to discover that the package is extensively used in schools where it can be employed to add that extra dimension to projects and aid the development of spatial skills. However, if you need advanced features such as texture mapping, or complex surface distortion tools then *TopModel* is for you. Like anything it's a matter of horses for courses – but two horses are better than one, *if* you can afford them. Happy modelling...

AU

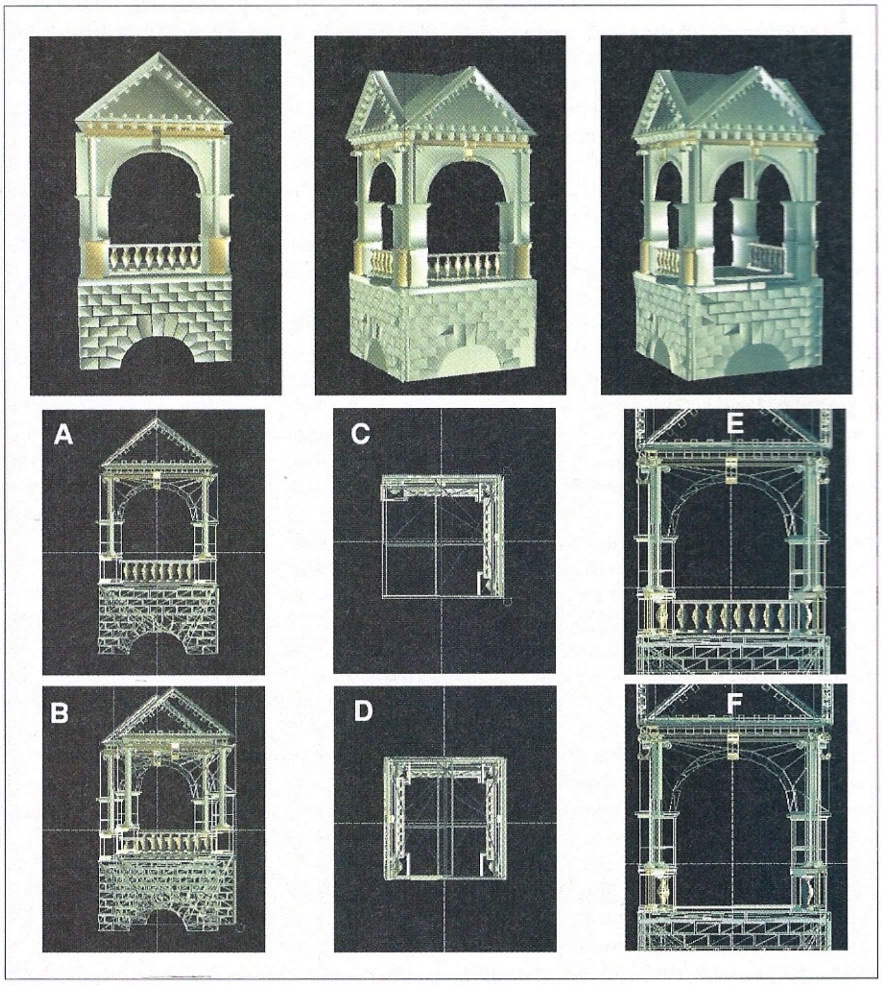


Figure VI : Creating the tower. A: Front elevation. B: Front elevation and clone. C: Plan view showing original group and rotated clone. D : Plan view showing original and two rotated clones. E: End elevation showing balustrade selected before deletion. F: End elevation showing finished tower after deletion of the balustrading.

Product details

Product: DaVinci 90
Price: £69 (single user), £269 (site licence) plus VAT & P&P
Company: Aspex
Address: Heather House, Down Road,
Tavistock, Devon, PL19 9AG
Tel: 01822-611060
Fax: 01822-611061
E-mail: aspex@argonet.co.uk
WWW: http://www.aspexsoftware.com

The **Electronic Font Foundry**, *11 Silwood Road, Ascot, SL5 0PY, tel 01344 875 201, fax 01344 875 202, e-mail sales@eff.co.uk, www.eff.co.uk*

Acorn World '98 Special Offers

... and more fonts from The Electronic Font Foundry

ELECTRONIC font FOUNDRY

1998 Best Sellers *EFF* TrueTypeTranslator *&* *EFF* FontTable

EFF **TTT** is the first ever, and the only existing translator of TrueType® fonts, the most common font format for Windows. *EFF* **TTT** will convert in seconds any TrueType font to the standard Acorn format, giving you access to all the fonts available to PC users, including thousands of free TrueType on the Internet.

- **Instant TrueType font translator**
- **Instant TrueType font sample viewer and full info displayer**
- **Instant TrueType complete font table creator**
- **Choice of encodings and settings**
- **Automatic adding of hinting for improved quality**
- **On-line comprehensive manual and interactive help support**

EFF **F**ont**T**able is a very simple and effective application for producing font tables in !Draw format. Creates professional looking tables in seconds, and can be easily customised by a number of options. A very useful application for compiling font catalogues, or printing samples. Fully supported by interactive !Help and on-line manual.

EFF **F**ont**T**able (for 1 computer), **£7+P&P+VAT** (£9.99 UK incl.)
EFF **TTT** (for 1 computer), **£39+P&P+VAT** (£47.59 UK incl.)

Special AW offer: buy EFF TTT and get EFF FT completely FREE (total £47.59 UK incl.)

1997 Best seller *EFF1* Professional Typography Cd

- **The best font Cd on the market - all fonts fully hand hinted**
- **500 professional Acorn fonts from original EFF typeface library**
- **Can be run straight from the CD or installed on the Hard Disk**
- **Full Latin 1 character set – for all West European languages**
- **Supplied in Risc OS3 and special PostScript formats**

"Best quality hinting around. The range is very well balanced... generous number of weights – a real benefit for creating a well contrasted but unified page design ... Fantastic value... **Everyone with the slightest interest in fonts should buy this disc!** *EFF Professional [Typography] disc really is a highly desirable acquisition, and heartily recommended"*
Richard Hallas, Risc User

EFF1 Cd, private user licence, **£69 UK incl.** (£57.22+P&P+VAT)
EFF1 Cd, school site licence **£99 UK incl.**,
EFF1 Cd, business licence **£149 UK incl**.

Special AW offer: EFF1 Cd for only £59 incl. (private user licence) – saving £10 on r.r.p.

Other special offers at the AW show include discounts on all EFF products and a bargain box – so come to see us on stand 6.

New Font Collections at Acorn World 1998

We are planning some exciting new releases for the Acorn World Show, and these are likely to include:

EFF Calligraphy Set – a large collection of modern handwritten scripts

EFF New Typography Set – the most fashionable fonts of the 1990's, some original and radical faces

EFF TypeFace Set – new picture fonts, including EFF TypeFace: ABCIOQA

Please contact us for further details – the information on new releases will also be available on our web site, www.eff.co.uk.

Special AW offer: discount of up to 25% on all new collections released at the AW'98

If you cannot come to the Acorn World simply send your order to us.

Name ....

Address..

....

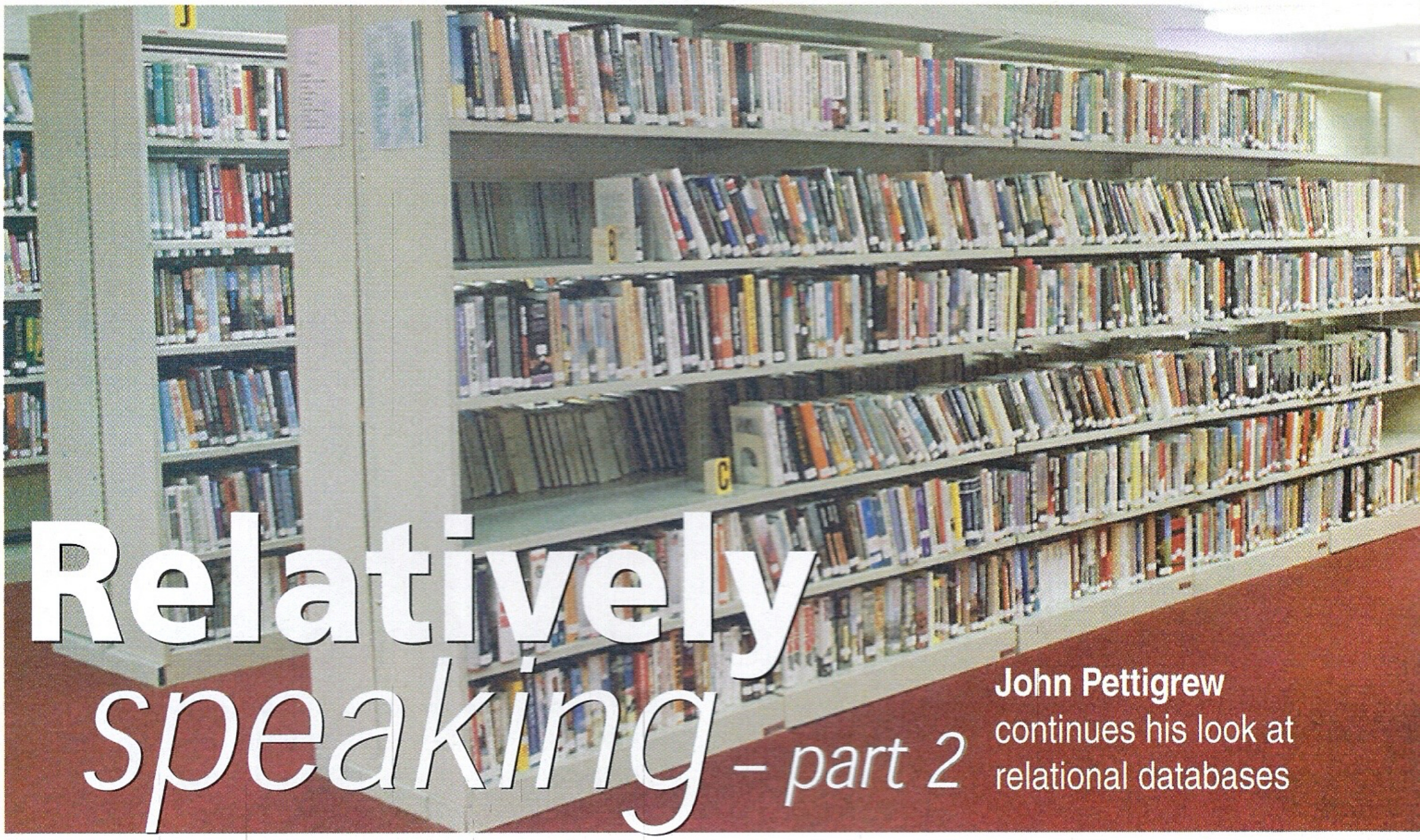
.... **Postcode**..........................

☐ I am a previous EFF customer, my serial number is:

I would like to order for the special AW prices:

EFF **TTT** + **free** *EFF* **FT**	**£39+P&P+VAT**	(£47.59 UK incl.)	☐
EFF 1 **Cd** *(private user)*	**£48.71+P&P+VAT**	(£59 UK incl.)	☐
Please send me information on new font collections (when available)			☐

I wish to pay the total of £__________ by cheque ☐ or credit card ☐ Nº:
☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ exp☐☐/☐☐
P &P for overseas orders is £3. AW'98 offer is valid until 30.11.98.



Relatively speaking – part 2

John Pettigrew continues his look at relational databases

Last month, I showed how to create a simple personal-finance system using a relational database. This month, we're going to move on from there to consider a more complex database. This was the original reason I found myself working with relational databases, because I foolishly volunteered to take over managing the directory and accounts for CamLETS (see Box).

The problem was that this job was then being done by someone using Microsoft *Access* on a *Windows* machine and, in addition, the accounts were printed on a different computer (an Apple Mac) through *Filemaker Pro* (another DBMS). This all seemed excessively complicated, and so I thought I could do better.

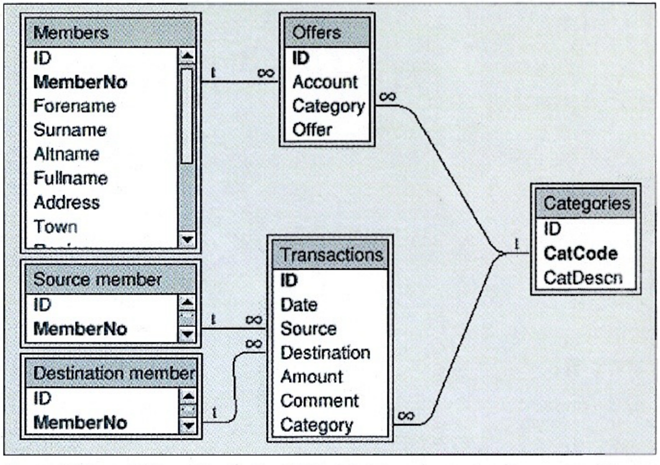


Figure I: The relationships in the LETS database shown in diagrammatic form. Note the 'one-to-many' constraints and the multiple copies of the 'Members' table

Planning the database

This system needs several tables of data. First, the members' details need to be recorded. The second table is the members' offers, with the details of the various services offered by each member. This involves a third table, storing the categories into which these offers lie – to analyse overall trading patterns, we need access to the values, rather than just using a pop-up list like last month; also, the categories apply to both offers and transactions so separating them out keeps data duplication to a minimum.

The fourth table contains the details of the transactions between members. Unlike last month's database, this must contain the details of two accounts, the source and the destination, and thus must simply contain the amount, rather than **Credit** and **Debit** fields, because the transaction is a credit for one party and a debit for the other.

The database must also allow several reports to be generated. First, account statements must be produced for each member still trading. Second, it must produce a directory of members and their offers (the 'Blue pages'), so that people know how to contact someone for a particular trade, and a 'Yellow pages' directory listing the offers by their category, so that people can find whether a particular service is available and who offers it. Third, it must produce some overall statistics on trading – listings of members' trading, top ten trades, that sort of thing.

Creating the database

As always, the first step is to create the tables that will hold our data. Table I shows the fields and their type for each table in the database (Note that 'MemberNo' is the primary key for the **Members** table – if this is not set, the relationships will not be right). Once these are set up, we must consider how we want the tables to be related. The **Members**, **Offers** and **Categories** tables are related in a fairly simple manner (one member will have many offers; one category will also contain many offers), but the relationships for the **Transactions** table are more complex.

Consider a trade in which member 1 gives a cheque to member 2 for computer training. The data is fairly easy to enter into the **Transactions** table – the date, amount and what the transaction were for are all on the cheque. However, two separate records in the **Members** table must be linked to each record in the **Transactions** table. The solution to this is to add the **Members** table to the relationship twice, renaming them so that one is called **Source member** and the other **Destination member**. The relationships for this database are thus becoming rather more complex than last month, and can be seen in Figure I. The **Members** table is perfectly

The fields in the main tables of the LETS database

Field	Type	Comment
Members		
MemberNo	Integer	
Forename	Text	
Surname	Text	
Altname	Text	For example, partners' names can go here
Fullname	Formula	Adds the name fields together (see Fig. 3)
Address	Text	
Town	Text	
Region	Text	A map grid reference for location
Telephone	Text	May contain brackets or spaces
Status	Text	Records inactive members
Renewal	Text	To produce renewal reminders
Opening balance	Real	
Opening turnover	Real	A measure of how active a member is
Categories		
CatCode	Text	A four-letter code used as the primary key
CatDescn	Text	The full name of the category
Offers		
Account	Integer	Foreign key to **Members** table
Category	Text	Foreign key to **Categories** table
Offer	Text	The service offered
Transactions		
Date	Date	
Source	Integer	Foreign key to **Members** table
Destination	Integer	Foreign key to **Members** table
Amount	Real	
Comment	Text	Details of the transaction
Category	Text	Foreign key to **Categories** table

suitable as it stands for entering people's details, because it need not contain details from any other table.

However, the **Transactions** and **Offers** tables are more problematical as they must contain the details of the members (so we can be sure we have the correct account), and it would be preferable to see the full category name rather than just a four-letter code.

This can be done easily, by using a layout based on the **Transactions** table with the **Fullname** etc. fields from the different copies of **Members** to bring up their details. When designing the layout to enter transactions, we must take the fields from the **Source member** and **Destination member** copies of the **Members** table, so that we get different records in each; these are not sub-views because we know that there will only be one matching record from each copy of **Members**. Adding **Categories** to the join and making the **CatDescn** field a pop-up list taking its values from the database will make also data entry easier. The layout for entering transactions is shown in Figure II.

The clever bit

As I said above, the **Transactions** table differs from the simple one we saw last month in two crucial ways – there are two accounts involved and there is only one amount field. This means that, in order to be able to move the Cams from the source to the destination, we must do something slightly clever.

First, create a new layout based on the **Members** table and call it **Transfers**. Add **Transactions** to the join and delete all fields from the layout (not the table!) except the **MemberNo** field. Next comes the clever bits: create a search (while still in layout mode) and enter the following, making sure that the query type is set to 'Select' (because we will be generating more than one result in each search):

```
  MemberNo:
 'Transactions.Source' Or
'Transactions.Destination'
```

Then create the following formula fields:

```
 Account: If
'MemberNo'='Transactions.Source' Then
'Transactions.Destination' Else
'Transactions.Source'
 Credit: If
'MemberNo'='Transactions.Destination'
Then 'Transactions.Amount' Else Null
 Debit: If
'MemberNo'='Transactions.Source' Then
'Transactions.Amount' Else Null
```

Click the OK button and return to browse mode. What have we done here? First, we are searching to find all records in the **Transactions** table in which the value in **MemberNo** matches either the source or the destination. Then, we create three new values in the formula fields: **Account** is set to contain the number of the other account. That is, if we matched the value in **Source** then this is set to be the destination, and if we matched the value in **Destination** then it is set to be the source. **Credit** is given a value only if we are the destination; **Debit** is given a value only if we are the source. (Thanks to Neil Raine at Iota for coming up with this approach.)

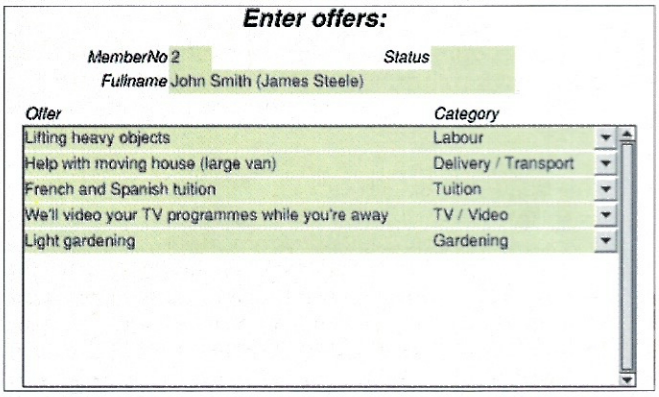
This all means that we have, for each record in **Transactions**, created two records in the **Transfers** query – one in which the **MemberNo** field matched the **Source** field and one in which it matched the **Destination** field. Thus, for example, in our example trade above, the single **Transaction** record would generate the following two records n the **Transfer** query:

MemberNo	Account	Credit	Debit
1	2		20
2	1	20	

Account statement

We now need to create a layout to view all these transfers and calculate the balance – the account statement. This is very similar

➤



Enter offers:

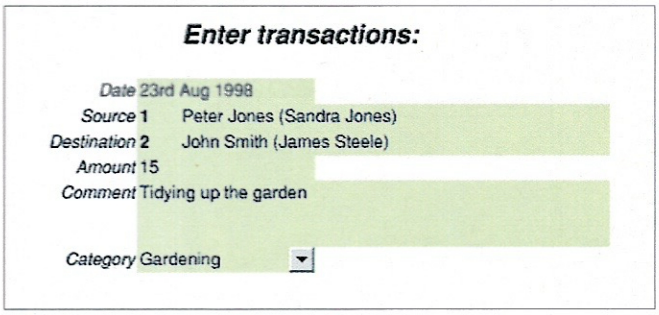
MemberNo 2

Status

Fullname John Smith (James Steele)

Offer	Category
Lifting heavy objects	Labour
Help with moving house (large van)	Delivery / Transport
French and Spanish tuition	Tuition
We'll video your TV programmes while you're away	TV / Video
Light gardening	Gardening

Figure II (a): The layout used to enter offers. Note the use of the full category name as a pop-up list ('Categories' was added into the join to allow this)



Enter transactions:

Date 23rd Aug 1998

Source 1 Peter Jones (Sandra Jones)

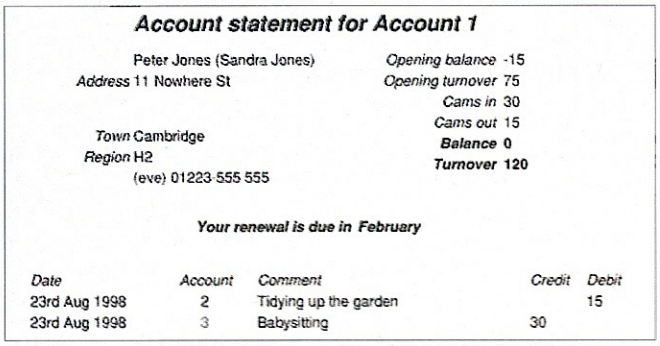
Destination 2 John Smith (James Steele)

Amount 15

Comment Tidying up the garden

Category Gardening

Figure II (b): The layout used to enter transactions. Note that the two members' details are both shown, as we used two copies of the 'Members' table (the DBMS takes care of updating the foreign keys in the 'Transactions' table, so we only need to add the membership numbers and select the category name from the 'Categories' table)



Account statement for Account 1

Peter Jones (Sandra Jones)
Address 11 Nowhere St
Town Cambridge
Region H2
(eve) 01223-555 555

Opening balance -15
Opening turnover 75
Cams in 30
Cams out 15
***Balance* 0**
***Turnover* 120**

Your renewal is due in February

Date	*Account*	*Comment*	*Credit*	*Debit*
23rd Aug 1998	2	Tidying up the garden		15
23rd Aug 1998	3	Babysitting	30	

Figure III. The account statement. Using the 'Fullname' field allows the names to be formatted correctly. The formula in this case is: **'Forename'+" "+'Surname'+" ("+'Altname'+")"**

What is CamLETS?

CamLETS stands for the Cambridge Local Exchange Trading Scheme, and is a bit like a glorified babysitting circle. In essence, such schemes rely on a bartering system – I do something for you and you do something for me, with no money changing hands. However, LETS are much more than this, because instead of direct exchanges, they provide a virtual currency (known as 'Cams' in CamLETS) that may be exchanged.

For example, I dig Bob's garden; this takes me two hours, and I get given a cheque for 20 Cams. I then need a lift somewhere, so I phone up Sheila, who drives me there; I pay her ten Cams, using another cheque. Sheila might use her Cams to hire a babysitter, and so on. These cheques are processed centrally, and everyone gets a statement every few months telling them how their trading is going.

➤ to the statement in last month's Finance database. We create a layout based on the **Members** table, rearranging the fields so that all the information is visible that needs to be (for this layout will be printed and sent out to the members) and near the top of the page. Now create a subview based on the **Join for transfers** query (which contains the results of the search we conducted above) and add the **Account**, **Credit** and **Debit** fields, and any others you like.

The balance could be constructed the same way as for the Finance database last month but, in this case, I need to know how many Cams have gone into and out of each account (this is one of the required reports), so instead of creating a **Balance** field with the formula,

```
Sum(Sum('Credit',-'Debit')) For
'Members'
```

I instead use two fields, **Cams in** and **Cams out**,

```
Cams in = Sum('Credit') For 'Members'
Cams out = Sum('Debit') For 'Members'
```

and then a **Balance** field,

```
Sum('Opening balance','Cams in',-'Cams
out')
```

and a **Turnover** field,

```
Sum('Opening turnover','Cams in', 'Cams
out')
```

The result of this is an account statement resembling that shown in Figure III.

Reports

The directories are still to be created but, fortunately, these are relatively simple. The Blue pages directory is based on the **Members** table and is, in fact, very similar in principle to the **Members offers** layout that we created to enter values into. The difference is that this layout must contain full contact details for each member, whereas these were superfluous for the earlier layout, and must also contain all the members (that is, be an **All records** layout).

For the Yellow pages directory, we want to list all the offers in a given category. Thus, we want a layout based on the **Categories** table with a subview based on the **Offers** table. Each offer must refer to the member who is making the offer, so both the **Offer** and **Account** fields must be placed in the subview.

Making the layout of **All records** type should then list all the categories together with the offers within them. To show only those categories that have offers in them, define a search while still in layout mode: enter "Not Null" into the **Offer** field to prevent any records with Null offers being shown. To sort the records into alphabetical order, define a sort while still in layout mode: click on the **CatDescn** field to sort the records from A to Z.

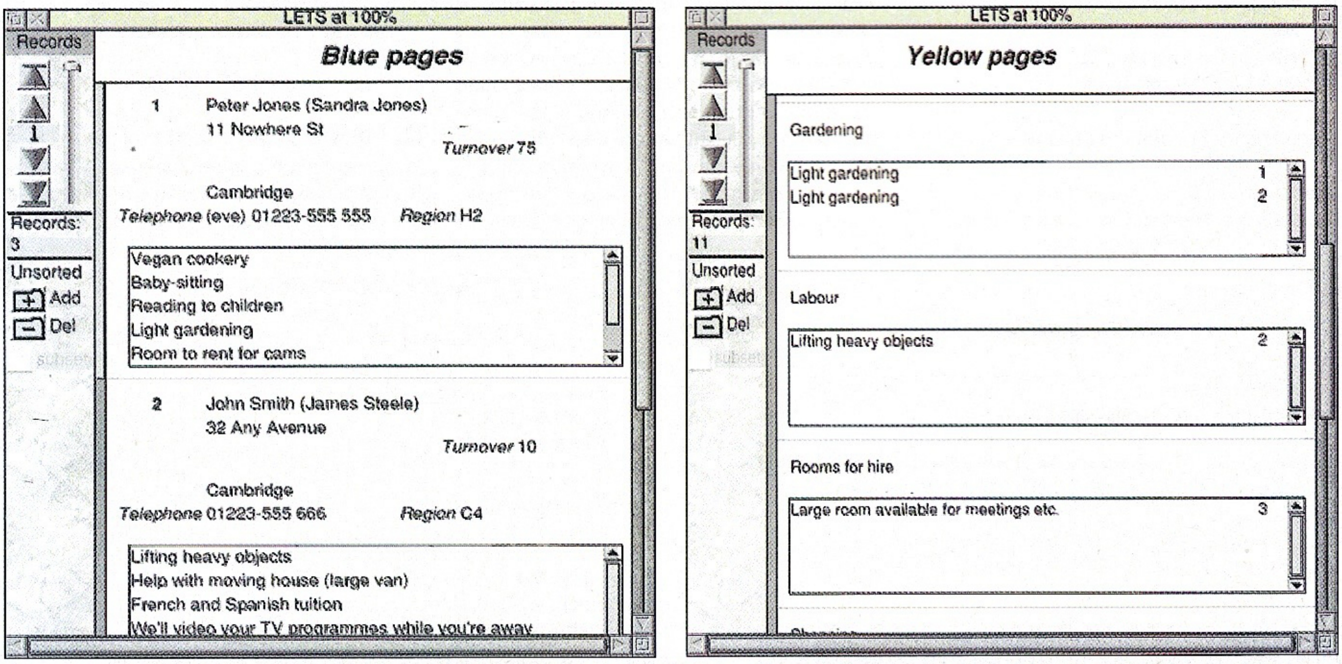
The directories that are produced are shown in Figure IV.

Still to come...

We now should have a functional database, and there is a copy of the database up to this point on the cover disc. However, there are several features that would make life somewhat easier, including improvements to the directories, and I will cover these next month in an introduction to the use of scripts and SQL (structured query language) in *DataPower 2*. AU

Acknowledgment

I would like to thank Neil Raine at Iota Software for all the help he gave me when I was setting this database up. It's good to see such prompt, persistent help, and I'm sure I was a nuisance.



Blue pages

1 Peter Jones (Sandra Jones)
11 Nowhere St
Turnover 75
Cambridge
Telephone (eve) 01223-555 555 *Region* H2

Vegan cookery
Baby-sitting
Reading to children
Light gardening
Room to rent for cams

2 John Smith (James Steele)
32 Any Avenue
Turnover 10
Cambridge
Telephone 01223-555 666 *Region* C4

Lifting heavy objects
Help with moving house (large van)
French and Spanish tuition
We'll video your TV programmes while you're away

Yellow pages

Gardening

Light gardening	1
Light gardening	2

Labour

Lifting heavy objects	2

Rooms for hire

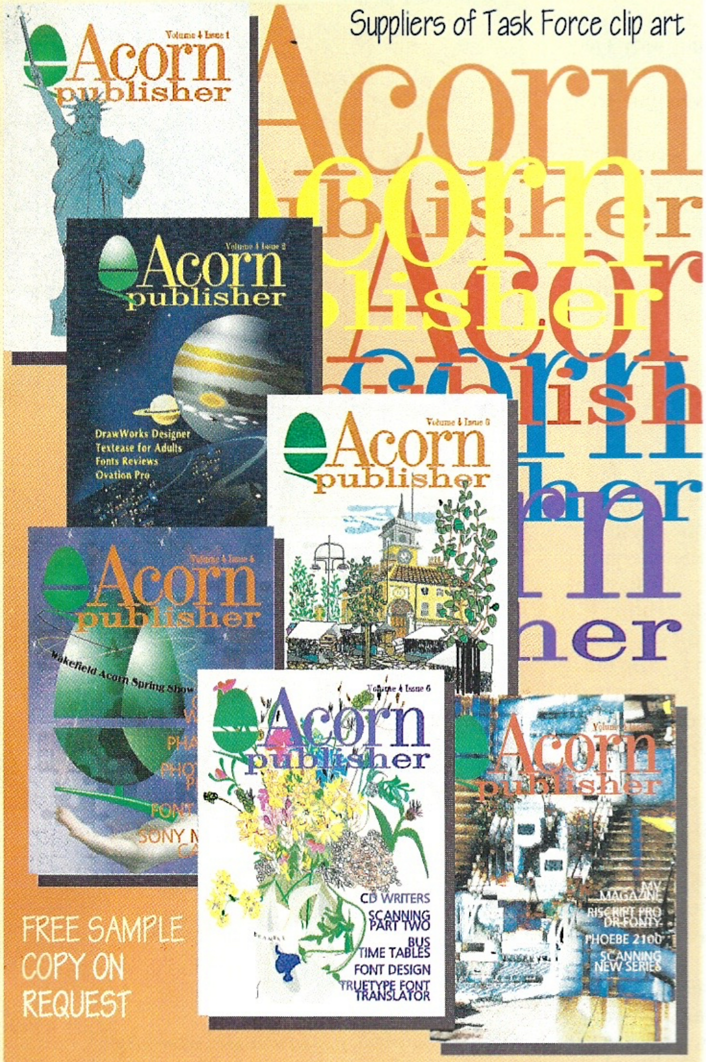
Large room available for meetings etc.	3

Figure IV a & b: The Blue and Yellow page listings. Both of these layouts make use of subviews from one table onto another to list all records that match the main record

AKALAT Publishing

P.O.Box 231, Barton, Bedford MK45 4HQ.
Tel. 01582 881614 fax 01582 881614
Email: akalat@kbnet.co.uk

Suppliers of Task Force clip art


Acorn publisher
Volume 4 Issue 1
Volume 4 Issue 2
DrawWorks Designer
Textease for Adults
Fonts Reviews
Ovation Pro
Volume 4 Issue 6
CD WRITERS
SCANNING PART TWO
BUS TIME TABLES
FONT DESIGN
TRUETYPE FONT TRANSLATOR
MY MAGAZINE
RISCRIPT PRO
DR FONTY
PHOEBE 2100
SCANNING NEW SERIES

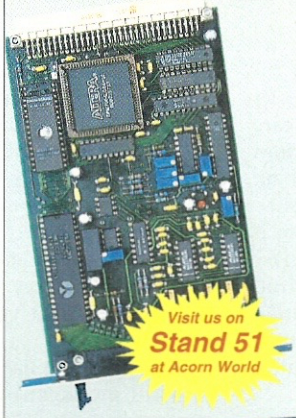
FREE SAMPLE
COPY ON
REQUEST

If you use applications like Impression, ArtWorks Ovation Pro, Studio24, Photodesk, HTMLEdit for desktop publishing, image processing and web site creation then Acorn Publisher is the indispensable guide you must have. Currently we are running a major series on scanning and image processing — probably the most comprehensive series ever written on this subject for Acorn users. Need we say more? As one reader wrote, "It is a joy to receive such a good looking magazine! That and its content make it 'one of the best'".

Still only £24.95* for a year's subscription, and we'll send you the issues with parts 1 & 2 of the scanning series at no extra charge. Why wait!

*UK only – Europe £28.95, elsewhere £34.95

ADC/DAC Analogue-digital and digital-analogue converter interface cards

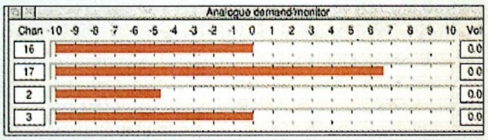

Visit us on
Stand 51
at Acorn World

- Single width eurocard, to fit ACORN Risc PCs.
- 16 analogue input channels
- 2 analogue output channels
- 16 digital channels
- add-on cards can increase capacity up to 64 digital input/output channels.
- Input sensitivity normally ± 10 volts
- Connect to the outside world via 50-way IDC plug.

With powerful and versatile software suite

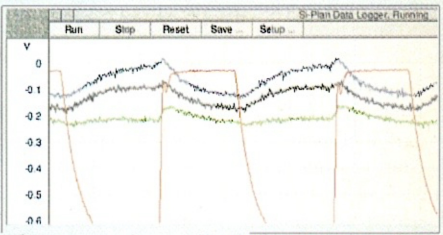
Analogue Digital Control Specify channel parameters: description • channel number • units • scale • zero. Then select any channel in one or more of the following formats:

DAC slider Display, monitor and control 4 channels.

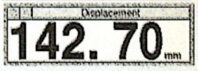

Analogue demand/monitor
Chan
-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
Volt
16
17
2
3
0.0
0.0
0.0
0.0

Digital I/O Generate or detect a 0V or 5V signal.

Data logger Show data on rolling graph with variable timebase. Plot over seconds or many days. Save data to disc as CSV files.

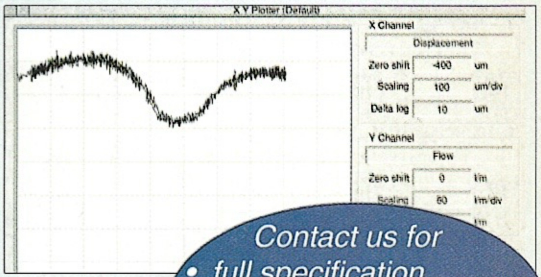

Si-Plan Data Logger: Running
Run
Stop
Reset
Save
Setup
V
0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6

DPMs Display data from any channel as a digital panel meter. Description and units entered in *AD Control* are incorporated.


Displacement
142.70
mm

Waveform generator Specify sine, triangle or square waves or import your own comma separated variable files.

XY plotter Plot data from two channels in XY format. Choose scaling and rate of sampling.


X Y Plotter (Default)

X Channel
Displacement
Zero shift -400 um
Scaling 100 um/div
Delta log 10 um
Y Channel
Flow
Zero shift 0 l/m
Scaling 60 l/m/div

Contact us for
- *full specification*
- *free software demo disc*
- *other cards/options*

Prices
Package including:
- 34 channel I/O card
- Si-Plan toolkit software suite
- Software operating manual **£450** (ex delivery & VAT)

50-way IDC plug breakout board with 50 screw terminals for connecting apparatus to the card: £39 E&OE

Si-Plan Electronics Research Ltd

Avenue Farm Industrial Estate
STRATFORD-UPON-AVON CV37 0HR
01789 205849 email adc@si-plan.demon.co.uk

Pretty

Alisdair McDiarmid explains security on the Internet

As the tabloids keep telling us, the Internet is not a secure medium for transmitting important data. Horror stories of intercepted credit card numbers scare most people away from online transactions and worry others who are concerned about Big Brother reading their e-mail messages.

The obvious solution to this problem is to stop anyone else reading the sensitive information by using encryption. Unfortunately, many forms of encryption can be broken within a short period of time by powerful computers and the simplest ones require almost no effort at all.

In the past, Internet users have relied on a mixture of luck and judgement to control access to their private data, until 1990 when an American computer scientist called Philip Zimmermann released his revolutionary public-key encryption software, *Pretty Good Privacy* (*PGP*).

Public-key encryption

Most methods of encryption can be described as single key ciphers. These ciphers make use of a single key which is used by the sender to encrypt the information and the same key is used by the receiver to decrypt it. The problem with this system is distributing the key – how do you make sure that only the sender and the receiver have the key?

This leads to a gaping hole in the security of electronic messages, as the password must be sent via a more secure medium (post or telephone for example) to retain any semblance of safety and even the Royal Mail isn't invincible.

Pretty Good Privacy (*PGP*) uses a more secure system which makes use of pairs of keys: Key A will encrypt but cannot be used to decrypt what it just encrypted but its complementary key, B, will decrypt. How it can possibly work is down to complex mathematics, but it does. Not only that, but it works backwards as well – if you use key B to encrypt then only key A will decrypt it.

What this means is that each person has a private key (A) and a public key (B). The private key must at all costs be kept entirely secret and the public key should be distributed as widely as possible.

So what can you do with this? As an individual I could encrypt a message with my private key and send it out, anyone could decrypt it with my public key. So what? Well it proves that *I wrote it* and no one else. More usefully if I want to send a secret message to Fred, I use Fred's public key to encrypt the message and only Fred, using his private key, can decrypt and read it. But the message could have come from anybody.

Finally, we can have totally secure point to point messages by me encrypting my message with my private key, and then re-encrypting with Fred's public key. Fred then decrypts with his private key and then my public key. Fred knows that I definitely sent it and only he could possibly read it.

How secure is PGP?

Pretty Good Privacy is a hybrid program which uses two encryption algorithms: IDEA and RSA. The IDEA technique is used for encrypting the PGP private key and a special passphrase and the RSA algorithm is used for the public-key encryption system.

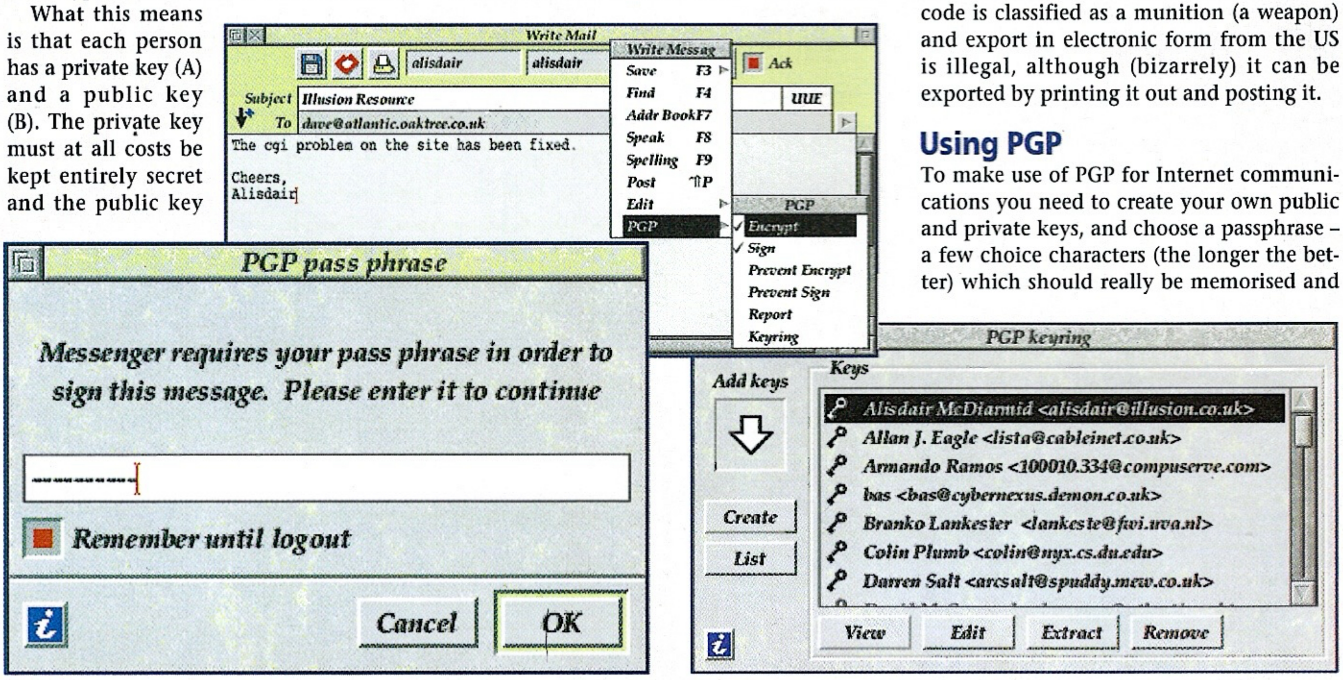
The only way to break a file encrypted with IDEA is by brute force; you have to check every possible key for decrypting the file. A 128 bit key is one of two to the power of 128 possible keys, and if you use a billion computers, each of which can process a billion keys per second it would take longer than the age of the universe to try every possible key.

Similarly, unless there is a breakthrough in factoring techniques, cracking a 1024-bit RSA key would take an extremely long time. In fact, it would be easier to physically steal your private key and interrogate you until you reveal your passphrase than to break PGP encryption.

This encoding power has the US government extremely worried, because they can't decode PGP encrypted messages without access to the private keys – any illegal activity described in the e-mails would be near-impossible to detect. The PGP source code is classified as a munition (a weapon) and export in electronic form from the US is illegal, although (bizarrely) it can be exported by printing it out and posting it.

Using PGP

To make use of PGP for Internet communications you need to create your own public and private keys, and choose a passphrase – a few choice characters (the longer the better) which should really be memorised and



Write Mail

alisdair | alisdair | ☒ Ack

Subject: Illusion Resource | UUE

To: dave@atlantic.oaktree.co.uk

```
The cgi problem on the site has been fixed.

Cheers,
Alisdair
```

PGP pass phrase

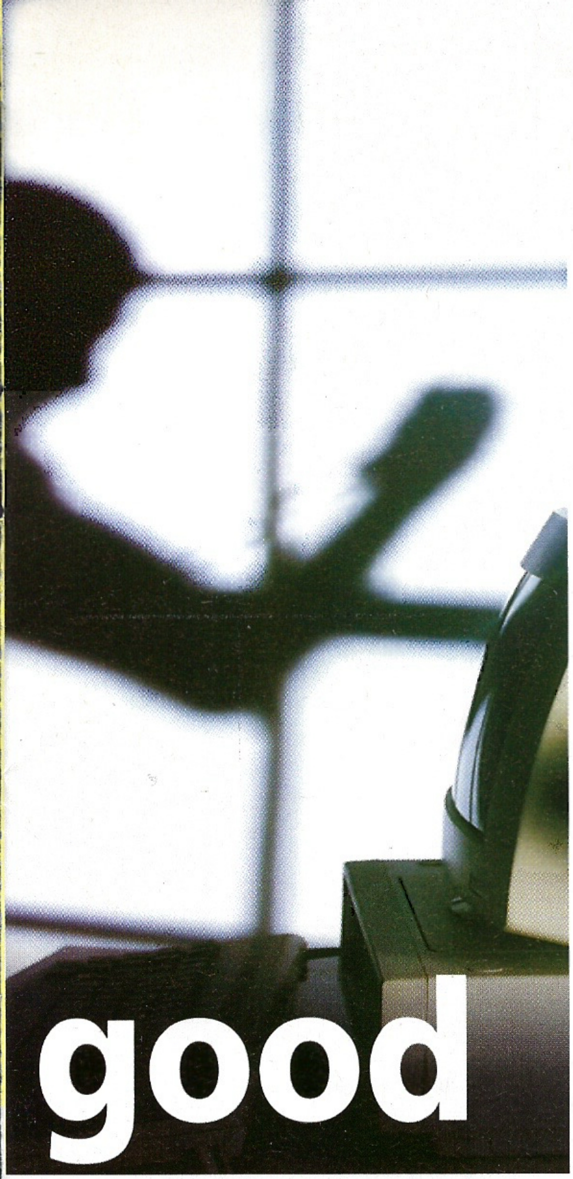
Messenger requires your pass phrase in order to sign this message. Please enter it to continue

☒ Remember until logout

PGP keyring

Keys

- Alisdair McDiarmid <alisdair@illusion.co.uk>
- Allan J. Eagle <lista@cableinet.co.uk>
- Armando Ramos <100010.334@compuserve.com>
- bas <bas@cybernexus.demon.co.uk>
- Branko Lankester <lankeste@fwi.uva.nl>
- Colin Plumb <colin@nyx.cs.du.edu>
- Darren Salt <arcsalt@spuddy.mew.co.uk>



good privacy

not written down. The installation program makes this process very simple and, for extra security, it uses a clever technique for generating the real random numbers required for creating the keys: it times your key presses on the keyboard accurately, which is much more effective than using a normal pseudo-random number generator.

Once you've created your keys you should give your public key to anyone who wants to send a PGP encrypted message to you. To encrypt a message the sender uses their PGP program with your public key, and the receiver must have the secret private key and a passphrase to decrypt it. Obviously, if you want to encrypt a message to someone else you need their public key. Your collection of other people's public keys is called a keyring and you can add and extract public keys easily.

The PGP software also allows the sender to prove that they wrote an e-mail or news posting. The PGP software can be used to "sign" a message with a few lines of seemingly random ASCII text, and anyone who receives this message can check the signature against the sender's public key with the PGP software. If the message had been altered in transmission, the signature would not verify. Of course, if you do not have the sender's PGP key, you can't verify their message, but as the public key is intended to be spread as far as possible you shouldn't have any difficulty obtaining their key.

Glossary

IDEA (International Data Encryption Algorithm): this is a highly secure conventional cipher method which generally uses a passphrase as its key. PGP uses IDEA for encrypting your private key so that only you can use it.

RSA (Rivest, Shamir and Aldeman): named after its inventors, RSA encryption is the standard for public key encryption.

Key: a few lines of ASCII characters which are intended to be unique and are used for ciphering. For example, here is my PGP public key:

```
Type       Bits/KeyID        Date             User ID
pub        768/12DC7219      1998/02/10       Alisdair McDiarmid
                                          <alisdair@illusion.co.uk>
-----BEGIN PGP PUBLIC KEY BLOCK-----
Version: 2.6.3ia
mQBtAzTg1igAAAEDALOLcWZyzwf101dZMdnJAcFZ4F4OwwtZJjuxZJBrGfdC5IEW
a24vAvLD+g0/jyDAwVkc68t53z/5Luj2lIFR8fVWLBnrn710ywQz4ukm61Xrv7RC
XM4PqijCPTe+EtxyGQAFEbQsQWxpc2RhaXIgTWNEaWFybWlkIDxhbGlzZGFpckBp
bGx1c2lvbi5jby51az6JAHUDBRA04NYpwj03vhLcchkBAZatAwCQVDo1jByzkMR5
EYFSAKNNqomu1LxdOc/cNzttWokwRuLzMnXCV9Srh6wKl6euNbLLqaShCyvIDpl5
EG5F3nkul+uvMdlRpwPuMIDk0148AT6zxzplXEmqg/WfK8xnmj8=
=bjxh
-----END PGP PUBLIC KEY BLOCK-----
```

Signature: a PGP signature is generated with the sender's private key and passphrase, attached to the end of an e-mail or news posting and can subsequently be checked with the sender's public key to prove authenticity of the message.

PGP and RISC OS

The current RISC OS port of PGP (2.6.3ia) is maintained by Nat M. Queen and is available freely from several sources on the Internet. PGP is, however, command-line software, and to make use of it you really need a graphical front-end or a supporting mail/news reader.

There are two PGP-enabled mail and news packages available for RISC OS: Mark Sawle's freeware *Messenger*, and Jon Duddington's commercial offering, *Pluto*. Using PGP with either of these programs couldn't be simpler: once PGP is installed it is only a matter of ticking a menu option or checking an option icon and typing in your passphrase. Both programs allow simple verifying of e-mails – just click on an icon – and news postings and a very easy-to-use keyring system: you can drop a text file with a PGP signature in it onto the keyring window to include it in your list.

For ANT's *Marcel* mailer, there is a freeware utility called *AutoCrypt* which will semi-automatically encrypt and decrypt e-mails and sign e-mails and news postings. While not as convenient as using *Messenger* or *Pluto*, it makes PGP very simple to work with.

In fact, PGP can even be used to encrypt normal files on a disc: a new program called *PGPLock* makes this simple, and the security level is, as always, very high. To encrypt a file you simply place it in the encryption directory inside the *!PGPLock* application and run the program. The program asks for your passphrase, the file is then encrypted using the IDEA algorithm, and the old file is deleted from the disc with military security to prevent it being recovered later.

Why use PGP?

You might not see a need for this high level of security if your e-mails are mainly trivial and not particularly private, but one day you might want to send sensitive information over the Internet.

Anyone looking for this data is likely to be aware of a sudden change to encrypted e-mails, so the more often you use PGP encryption for everyday e-mails, the less suspicious it will look.

PGP is simply the best encryption system of its kind available. The most surprising thing about it is that it is entirely free – download it today and your messages will be secure from now on. AU

URLs

The RISC OS port of PGP 2.6.3ia along with *PGPfront*, *AutoCrypt*, *PGPLock* and other PGP information is available from:
http://web.bham.ac.uk/N.M.Queen/pgp/acorn.html

Messenger is available from:
http://www.locutus.demon.co.uk/messenger/

A demonstration version of *Pluto* along with ordering details can be downloaded from:
http://www.argonet.co.uk/users/jsd/

DACO SYSTEMS

CENTRES OF TECHNOLOGY
Acorn
CENTRES OF TECHNOLOGY

Providing Acorn Solutions For Over 16 Years

A REVOLUTIONARY OFFER ON

Phoebe
RISC PC 2

SAVE UPTO

£ 500*

Sales Hotline (5 Lines)

0121 706 8933

All prices include VAT at 17.5%

*Phone for full details. Carriage not included. All details correct at time of going to press E&OE

Plasmon
Plasmon
CDR480
WRITING

Burn it up...

In the first of two articles, **Stephen Scott** looks at the current solutions for CD writing on Acorn machines

Five years ago, the prospect of recording your own CDs would have been a very expensive and time-consuming one. Only large companies could justify the cost of owning such a device. The fact that the best drives at the time would still commit permanent errors to discs meant that much time and money was wasted, while the discs themselves became little more than shiny coffee coasters.

CD-ROM offers big advantages. For one thing, nearly every modern computer has a CD drive, so you can be sure that your work will be seen on a wider range of machines. Another factor is that data is stored permanently. You can have your CDs next to a loudspeaker, and not worry about the data it contains being lost, unlike magnetic media, which would get scrambled at the merest sniff of such a presence.

Now we are in 1998. Although DVD (Digital Versatile Disc or Digital Video Disc) has now been introduced, such drives can support normal CDs, so the format will not die instantly as previously feared. However, the cost of CD writers has fallen dramatically. In the PC world, drives can cost as little as £150. The Acorn world, however, commands a higher price, yet still within the budgets of most users. For an average cost of £400, you can have your own CD writer and accompanying software to backup your data, and even create your own audio CDs containing tracks from your favourite albums.

In the first of two articles, I will look at four external SCSI CD-R drives, from three major manufacturers – the Yamaha CRW4260tx, Panasonic CW-7502 (in two forms) and Plasmon CDR480.

Parallel versions of some of these drives are also available. The Plasmon and Yamaha drives were supplied directly by the manufacturer, and may include PC software, and some free CD-R discs to start you off.

The drives will be tested using the three main choices of software in the Acorn market to perform CD-R preparation; *!CDBlaze* from Cumana, *!CDBurn* from Warm Silence Software, and *!CDScribe* from Eesox. These products support an ever lengthening list of CD-R drives, so before purchasing any drive, contact the company to see if it is supported. Next month, I will report on how the software fares with these drives.

My test machine was a Risc PC 600 with 34Mb memory, 200Mb internal drive, and Morley SCSI I card (upgraded with AlSystems *PowerROM* to make it SCSI 2 compatible). I had on stand-by, a review copy of Cumana's SCSI II card, which is more recent, in case I had any connection problems.

Since the software introduces the concept of multi-sessioning (where you do not have to prepare the whole CD in one sitting), my testing method will involve saving two tracks, one a computer data track, the other an audio track from an album. I will then repeat the process using different source data.

First, we will look at the drives themselves. All four share the same features. The front fascia is usually adorned with the standard headphone socket, volume control, and eject button, the only difference being the additional light to show writing ➤

in progress. At the back, apart from the power cable socket you will have two SCSI sockets (either Centronics style or second generation 50 pin SCSI II sockets), a SCSI ID switch, line out sockets for connection to amplifiers, and termination on/off switch. With all this in mind, let's look at the drives on offer.

Cumana and Eesox CD-R drives

Both these drives are actually one and the same — the Panasonic CW-7502 drive. This is the problem with allegedly different drives; the housing may not look the same, but the drive inside may well be. It's hard to tell, so I was caught out on this one. The Cumana drive actually has a larger footprint than the Eesox, with approximate dimensions of around 200x300x60mm, as opposed to the 150x300x45mm dimensions of the Eesox drive.

This is purely academic, for both solutions offer the same specifications of 8x read and 4x writing ability. This is the average for any CD-R drive. By purchasing either drive with *CDBlaze* and Cumana SCSI II card, Cumana compatibility is guaranteed.

Both drives use Centronics SCSI sockets for connection, and have built-in termination. It is important to check whether you have the correct cabling for your SCSI card, otherwise a trip to Maplins will be necessary. The SCSI ID is selected through the use of dip switches at the back of the Cumana drive, while a small number dial with plus and minus buttons above and below is employed on the Eesox drive. The back of this drive is actually more tightly packed as a result of its smaller footprint. But do not be fooled — they are both the same drive.

I find that the power button at the front of the Cumana drive is too recessed to press comfortably. I understand this may have been done to prevent accidental use during the writing process, but having the power button at the back would have been a better idea - safely out of the way of prying fingers.

Plasmon CDR480 drive

Measuring 175x65x265mm, and weighing approximately 1.5kg, the Plasmon drive is the lightest of the four drives, using a plastic fascia instead of the painted metallic casing of the other models. This is due to the location of the power unit outside the drive, whereas the other drives have a power socket.

Like the Cumana/Eesox drives, the Plasmon is a 8x read/4x writable drive. Included in the packaging are the PC software, a large ring-bound manual, and blank disc to begin with.

The power switch is located at the back of the drive, and uses dip switches to determine the SCSI ID of the drive.

Recordable CDs on Acorn machines

A trip into stores such as PC World reveal that there are many brands of CD-R discs on the market. The traditional disc has always had a gold surface, yet you can buy blue, green and dark coloured discs as well. This year marked the introduction of silver coloured discs, which appear to look the same as conventional discs. These colours have an effect on the way your CD drive can read them. It is very annoying to buy a batch, and write your data onto them, only to find that most other CD drives cannot read it.

Generally, gold discs are the best, as they are the oldest kind. This is true for any machine, not just Acorns. Some users still possess double speed drives, which were the norm in 1993 and 1994, when the original Risc PC was unveiled. Very old drives may not be able to read CD-Rs at all, so the best advice is to upgrade your drive. With 24x drives hovering at the £70 mark, they are extremely cost-effective compared to five years ago, when even an 8x drive cost well over £100.

In my experience, TDK and Kodak have been the most reliable manufacturers. My Risc PC is still fitted with the original double speed internal Cumana drive offered at cut price to new owners of the machine, and these discs work perfectly.

ReWritable CDs on Acorn machines

CD-RWs (CD-ReWritable) are a very recent technology. Its main problem is that the way the disc is made is very likely to prevent it working on most conventional CD-ROM and CD-R (CD-Recordable) drives.

In essence, CD-RW is not as portable as CD-ROM or CD-R, not only on Acorn machines, but on PCs and Macintoshes. Certainly, if you own a CD-ROM drive made before the end of 1996, then it will definitely not work as the surface of the CD-RW disc will not reflect a strong enough laser beam for the drives of that time to read.

The Yamaha drive reviewed here is ideal for users who wish to back-up their data occasionally, but without having to spend more money on CD-Rs. CD-R discs, on the other hand, should be used if you intend to share your work with others.

The issue of copyright here is a strong one, and is made very clear in some of the product manuals, most notably Cumana's *!CDBlaze* manual. Recent advances in technology, such as the emblazening of uncopyable holograms on the surfaces of CD-ROMs (currently undergoing further testing and development), are a step in the right direction. Suffice to say that any unauthorised copying is a criminal offence, and offers harsh penalties upon conviction.

Yamaha CRW4260tx drive

Weighing 2.5kg, and measuring 170x68x327mm, this can be considered to be the most luxurious of the drives on review here. Ignoring the fact that it is a rewritable drive, it is attractive in appearance and very quiet in operation. The only niggle is the fact that the power button is at the front, and not the back, like the Cumana drive — again this leaves the drive open to being accidentally switched off.

The drive is a 6x read, 4x write and 2x rewritable model. Current hardware standards prevent rewritable drives being any faster than double speed, and this feature reduces the normal read speed of the drive, compared to the others. However, the fact that rewritable discs can be used makes this drive extremely cost-effective, as long as the internal drive on your Acorn is new enough to understand this media.

At the back of the drive are two line out sockets, a switch to determine the status of termination, and two SCSI sockets. These sockets are 50 way, as opposed to the 50 way old style sockets of the other two drives. No SCSI cable is supplied with this drive, so extra expenditure may be necessary, depending on which SCSI card you have.

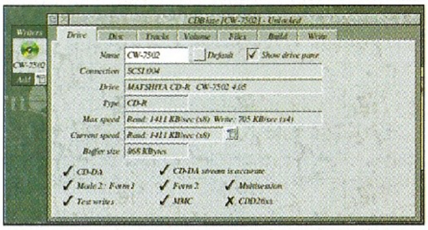
The value pack is superb value for money, if you own a PC card. Purchasing either *CDBurn* or *CDBlaze* will push the final expenditure up to roughly the same level as the other drives in this review.

For your money, however, you receive not only the PC software, again on CD-ROM, and blank CD-R disc, but also one blank rewritable disc. The usual price tag of just one of these discs is about £20, so to have one thrown in for free is excellent. Also supplied are some free disc labels, but use these with caution. If they are not stuck properly on the disc, they can get caught in the drive's spindle mechanism, rendering the drive unusable. This warning applies to any CD-ROM drive.

Now we will look at the three software solutions. All three of them offer more or less the same functions, particularly dummy writing sessions, which allow you to produce test burns without the risk of committing bad data to disc. All three also support multi-sessioning, although *CDScribe* falls down here in its reliance on the badly ageing *!ISOForm* application bundled with it.

!CDBlaze

This package is the most recent of the three utilities on test, and at the time of writing



Name: CW-7502 ☐ Default ☑ Show drive pane
Connection: SCSI 0:04
Drive: MATSHITA CD-R CW-7502 4.05
Type: CD-R
Max speed: Read: 1411 KB/sec (x8) Write: 705 KB/sec (x4)
Current speed: Read: 1411 KB/sec (x8)
Buffer size: 968 KBytes

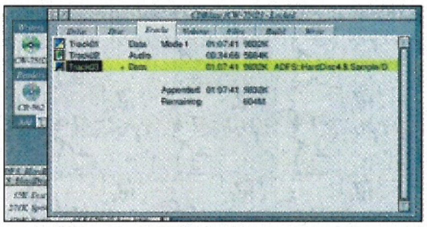
✓ CD-DA ✓ CD-DA stream is accurate
✓ Mode 2: Form 1 ✓ Form 2 ✓ Multisession
✓ Test writes ✓ MMC ✗ CDD26xx

The main window of *!CDBlaze*, with current CD drives on the left, and tabbed windows stands at version 1.08. As a registered user, you are entitled to free updates of the software as and when it arrives.

The software comes in a white folder with disc and manual. The manual I received was a preview edition, and did not represent the final version. A section is included for impatient users who are desperate to cut a disc. In the case of all the items on review here, you *must* read the manuals. CD writing is not an easy process, being a veritable minefield of pitfalls and stumbling blocks. Wasting discs is a unpleasant experience, and having to buy more is even worse.

Once the software is installed, it will appear on the iconbar. From the menu you can view an options dialogue, from where specific aspects of *!CDBlaze* can be configured from their default values. This way, you can customise the program to prevent further unnecessary fiddling.

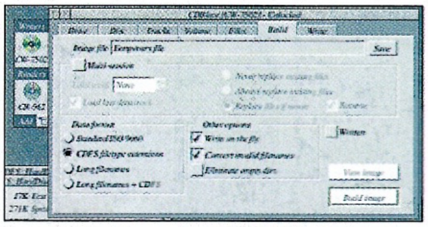
Clicking with Select brings up the main *!CDBlaze* window, which contains a set of windows hidden behind one another, with only their 'tabs' showing at the top of the window. By clicking on a tab, its window is brought to the front. I like this idea, but it is also obvious that RISC OS was not designed for it, and is therefore quite slow in redraw time, even on a Risc PC.



The tracks tab is where you prepare your fantasy audio discs. Just drag and drop and away you go...

Along the left hand side of the window sits a sidebar displaying whatever writer or reader drives happen to be connected. On initial start-up, no drives are displayed, but by clicking a button to the right of the 'Add a drive' message, *!CDBlaze* will search for any such drive and list them. This list should include any writer or CD-ROM drive, and even 'fake' CD-ROM drives, through the use of Warm Silence Software's *!CDFaker* utility (more on this later).

Having configured the drives, you can work your way through the tabs from left to right. The first tab shows the currently selected drive, what its features are, such as read/write speed, whether it supports multi-sessioning, and so on. The second tab contains details of the disc in the currently selected drive, which is always the topmost drive in the sidebar.



From the Build panel, you can build the image to a range of formats

The sidebar contains a hidden feature. By double-clicking on a drive icon, the drive's contents are displayed, using a module called *CDRFS*. This allows audio CDs to be displayed in a filer window, in either Wave, Replay or Raw Data format, depending on your choice in the Options window. The first two should be used if you intend to copy audio CDs. My first attempt failed in that I had the audio track set accidentally to Data format, producing a garbled mess instead of music.

What is ISO 9660?

In 1988, the International Standards Organisation (ISO) met with delegates of the main computer hardware companies to determine a standard for the way data was saved onto compact discs. The standard would have to be platform independent, so that any type of computer could read them.

The standard was agreed, and initially entitled High Sierra, named after the hotel where the delegates met. The standard was officially named ISO 9660. The actual document that describes the format is quite long and technical, but essentially, there are three restrictions:

- All filenames must be stored in upper case lettering, and may include numbers, and the _ symbol. (A to Z, 0 to 9, and _) The _ character would be used to separate the DOS extension from the main filename.
- The directory hierarchy must be no more than eight levels deep. In the case of RISC OS, this equates to CDFS::0.$.1.2.3.4.5.6.7.
- All filenames must be no longer than 12 characters. This includes DOS extensions. Therefore, WINDOWS_TXT would be acceptable, whereas WINDOZEY_TXT would be one character too long, and would therefore be truncated by one character.

It was agreed that DOS was the most populous operating system at the time, so the standard was fitted around the 8.3 filenaming convention. Microsoft have now devised the **Joliet** standard, which works alongside ISO 9660, but allows longer filenames, and deeper directory structures, under Windows95/98. Some would accuse Microsoft of locking the door after the horse has bolted. Yet in 1988 (and 1998) there were far more PCs than Macs, which had long filenames from the start.

The Tracks tab is where you can drag such audio files from either the CD reader drive or from your hard disc if you only have the one drive. Within this tab, you can move the tracks around in any given order, although if you intend to do a combination of both data and audio, then it appears that the data track is always placed first when you write the disc. Be wary that your hi fi will not differentiate between these tracks, since *!CDBlaze* does not support the Blue Book standard (see panel) so never play track one!

The Volume tab is for advanced users who wish to personalise the CD with details such as the publisher, copyright statement and even the time the CD was created. The manual does not concern itself much with this tab.

The Files tab is used for dropping files in, such as Wave files, applications, or your entire hard disc if you wish to back it up to CD. The Build tab creates the image file necessary to burn the disc. From here you can determine whether the CD should be standard ISO format, CDFS extended, or with long filenames, for use with CDRFS or Microsoft's Joliet standard (see panel).

Finally, the Write panel does the business, either as a test burn or as a final burn. A progress window shows how the software is getting on with the transfer of data to the disc. You can also choose whether to close the disc, which prevents further data from being added later on, although this is best left until the disc is nearly full.

I find *!CDBlaze* quite pleasurable to use, having managed to successfully create a disc. I do find the manual very annoying in its lack of detail in some areas, and some parts need clarifying, such as how mixed data/audio discs are made, and the descriptions of icons in various windows. In my opinion, when the manual is improved, I would find *!CDBlaze* a very tempting purchase.

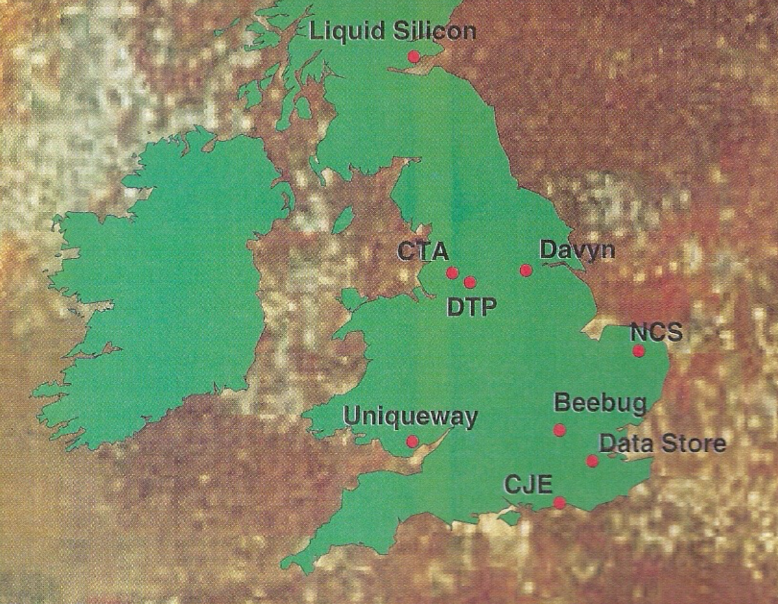
CDScribe

Eesox have been veterans of the CD writer market for a number of years. Their approach to software is more technical. Bundled with the above drive were three discs, one containing the soft-loadable SCSI II driver, the other containing the soft-loadable ATAPI driver, and the third containing the *!CDScribe* software itself, along with a copy of Acorn's *!ISOForm* application.

The documentation supplied with the software (currently version 2.08) is haphazard to say the least; one leaflet to describe the SCSI software, another for ATAPI, one for the Eesox 'Fast SCSI' card (if supplied), and one for *!CDScribe* itself. The writing style is rushed and hard to fathom for first time users. Even the online help is nothing more than a few drawfiles. The software, however, is different. The windows are ➤

Order from a participating dealer

The Acorn Software Network



Revision 7c

Business & Utilities

Album Pic.Comp.Library	29.37
Ant Internet Suite II	110.51
ArcFax	35.00
ArcFS2	29.37
ARCshare	49.95
Artworks	104.69
BBC Emulator 6502	17.63
Bitfolio More Cartoons	10.00
Bubble Help	7.00
Cardshop	22.45
CD Burn	58.75
CD Fast 2	29.37
CDtracker Plus	24.95
Celebration	31.46
Cineworks	151.95
Complete Animator	94.05
DataPower 1	110.00
DataPower 2	166.32
DaVinci 90	81.08
Desktop Tracker	41.23
Diagram It	50.00
Digital Symphony	56.95
Disc Doctor	28.45
Disc Rescue	45.00
Draw Works 2	21.50
Draw Works Designer	31.50
EasiWriter Professional	143.99
Easy C++	116.32
EasyClip	39.95
EasyFont Pro	59.95
Eureka 3	110.51
FastSpool+	17.62
Fireworkz	110.50
Fireworkz Pro	166.31
Font Directory Pro	65.00
Font Pack 312	25.00
FontFX6	29.95
Formulix	72.96
Game On! 2	15.00
Graphics Load. (Impressn)	41.23
Graphmate	45.00
Holy Bible (Illus.) BP(KJV)	82.25
HTML Edit 4	53.00
ImageFS 2	44.59
Image Outliner	57.58
IMaster/Epson FilmScan	35.00
IMaster/Epson GT TD	35.00
IMaster/Canon TD	35.00
IMaster/UMAX Astra TD	35.00
Impact Major	106.04
Impact Pro	139.53
Impression Publisher	136.41
Impression Style	83.54
Keystroke	34.95
Knowledge Organiser 2	71.95
MacFS Light	51.81
MelIDI	129.00
Midi Synthesiser	46.94
Midi Works	151.95
MovieFS	29.95
Mr Clippy	20.00
Ovation Pro	193.87
P'rllel port Zip driver (Argo)	34.08
PC Pro (+PC Exchange)	46.55
PC Sound Professional 2	40.00
Personal Accounts V4	49.00
Photo Link	65.55
Photo Real (Canon)	65.86
Photo Real (Epson Photo)	65.86
Photodesk Lite	128.01
Photodesk 2	256.02
Photodesk FF1-file formats	18.95
Photodesk FX1 (Effects)	18.95
Photodesk FX2 (Effects)	18.95
Plot	71.95
Poster	104.57
Pro Sound	113.95
ProArtisan 2	79.14
ProArtisan 24 (RPC Only)	89.95
Prophet 3	179.77
Quick Link S/W only	32.90
Ramplify	19.95
Rhapsody 3	89.95
RiscCAD	279.06
RSDFS	45.00
RTF & WP Imp.Load/Save	30.66
Schema 2	121.50
Serenade	89.95
SerialNET	20.00
ShortCuts	15.00
Sibelius 6	110.00
Sibelius 7 Student	330.00
Sibelius 7	665.00
Sleuth 3	151.57
Snapshot	57.58
SparkFS	25.00
Speed	9.00
Squirrel Database	155.15
StrongGuard	25.00
Studio 24 Pro	139.52
Studio Sound	113.95
Tablemate Designer	60.00
Tablemate Classic	34.50
Talking Textease MMedia	90.00
TBA FS	23.74
TechWriter	166.31
TechWriter Professional	222.12
Termite Internet	89.24
Textease	54.69
Textures	11.99
Titler	89.95
TopModel 2	145.11
Topographer	71.95
Touch type	46.88
Turbodriver (Canon)	54.69
Turbodriver (HP)	54.69
Turbodriver(Epson Stylus)	54.69
Undelete	18.95
Virtualise	22.45
Web Designers Toolkit	30.00
WebMaster	116.32
WebSpider	40.00
WebTool for ANT Suite 2	29.38
WIMP Basic	44.99
WIMP Progs Toolkit	21.95
Win95FS	41.12
WinRisc!	29.95
XStitch 2	35.00

Education

Advantage	58.04
Amazing Maths	29.31
Animated Alphabet, Talk	33.43
Arc Venture AngloSaxons	39.01
Arc Venture Egyptians	39.01
Arc Venture Roman's	39.01
Aztecs, Age 7-11	50.17
Badger Trails,age 9-11	50.17
Best Four Maths	46.41
Calabash Pirates	25.98
Copernicus	29.99
Cromwell the Fire Fighter	46.94
Crystal Rain Forest	50.17
DataSheet	47.00
DataSweet 3	69.33
Dazzle +	83.71
Dinosaurs	13.49
Doodle	32.37
Early Essentials	13.49
Elf Tales	36.78
English	13.49
Essential Maths	13.49
Essential Science	13.49
Expl with Flossy the Frog	28.79
First Logo	29.02
First Words with Smudge	25.98
Freddy Teddy's Adventure	23.50
French	13.49
Full Phase	43.52
Fun School 3: age 0-5	24.99
Fun School 3: age 5-7	24.99
Fun School 3: age 8+	24.99
Fun School 4: age 0-5	24.99
Fun School 4: age 5-7	24.99
Fun School 4: age 8+	24.99
Geography (10/10)	13.49
German (10/10)	13.49
Granny's Garden	28.79
James Pond Run. Water	27.00
Junior Sibelius	54.69
Kid Pix	32.31
Mathmania	35.25
Maths (Geometry)	13.49
Maths (Number)	13.49
Maths Circus	32.31
MathsBook (Talking) (+/-)	41.13
Mega Maths	24.99
Micro English	24.99
Micro Maths	24.99
My World 2 + 2	54.70
Naughty Stories Vols 1-6	44.65
New Teddy Bear's Picnic	36.78
Nightsky	71.95
Nursery Rhyme Time	33.43
Oxford CLIP ART	22.32
Oxford Reading Tree 2	44.65
Oxford Reading Tree 3	44.65
Pendown DTP	65.85
Pendown, Talking	60.27
Photobase: Science	58.04
Playdays age 3-8	23.40
Playground (Freddy teddy)	23.50
Portfolio (1-5 users)	35.25
PrimeSolver full ver KS1-4	69.95
Smudge the Spaniel	25.98
Spelling & Punctuation	13.49
Spex+ Home Version	39.95
Splosh+ (1-5 users)	51.70
Starspell (Speaking)	49.94
Table Aliens	27.85
Talking Textease	72.55
TinyDraw/TinyLogo	29.37
Tizzy's Toybox	47.94
Versatile	45.76
Watch Magic Grandad	30.13

All Prices Include VAT @ 17.5%

New & Featured Software

NEW from 4D..

Supersnail

A fun new platformer that's anything but slow!

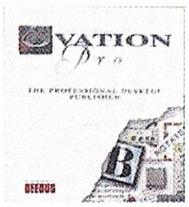
£25

NEW!

PhotoReal Drivers for Epson Stylus Colour Photo Printer

£65.86

Ovation Pro



Powerful & flexible DTP package

£193.87

Coming Soon...

Morph & Descent

Brings You The Best Choice in Software

Games

2067 BC	18.95
ACross	24.99
Alone in the Dark	34.99
Anagram Genius	20.00
Aries	22.50
Axis	23.74
Battlechess	29.99
BHP Brutal Horse Power	28.49
Birds of War †	30.00
Black Angel	30.00
Break 147 & S'pool †	27.00
Burn Out	23.70
Carnage Inc.	22.50
Cataclysm	20.00
Champions Collection	29.99
Chocks Away Compend.	27.00
Chopper Force †	30.00
Chuck Rock (NRPC)	9.99
Cobalt Seed	23.74
Command Ship	23.74
Crystal Maze, age 7+	28.45
Cyber Ape	18.99
Cyber Chess	31.50
Darkwood	20.70
Demon's Lair	20.00
Drifter (DD)	31.50
Drifter (HD)	31.50
Dune II	26.60
Dungeon †	27.00
E-Type 2 †	30.00
E-Type Compendium	22.50
Eclipse Collection	22.49
Empire Soccer	24.95
Enter the Realm	25.00
Exodus HD	25.00
Exotic Adv of Sylvia Layne	20.00
Fervour	17.95
Fire and Ice	23.39
Formula Two Thousand	23.74
Global Effect	27.00
Gods (NRPC)	9.99
Groundhog	12.00
Haunted House	25.00
High Risc Racing	25.00
Holed Out Compendium	20.00
Interdictor II	17.95
James Pond 2+	16.20
Krisalis Collection (NRPC)	29.99
Logic Mania	27.00
Lotus Turbo Ch2 (NRPC)	25.98
Magic Pockets	22.09
Mirror Image	18.99
Pandora's Box	25.00
Patience Addict	19.95
Play It Again Sam 1	24.95
Play It Again Sam 2	24.95
Play It Again Sam 3	24.95
Play It Again Sam 4	35.00
Powerband (NRPC)	20.00
Premier Manager	24.69
Pushy (Shovy)	12.00
Real McCoy 2	35.00
Real McCoy 3	35.00
Real McCoy 4	35.00
Real McCoy 5	31.50
Repton 3	24.95
Rick Dangerous	15.26
Sally & Wally	23.70
Saloon Cars Deluxe	31.50
Scrabble	26.59
Shuggy	25.95
Silver Ball	12.00
Sim City 2000 (for A5000)	39.99
Simon the Sorcerer	27.00
Small †	21.20
Spectrum Emulator Z80M	17.63
Spobbleoid Fantasy	30.00
Starfighter 3000	29.95
Stereoworld	22.50
Stuntracer 2000 †	35.00
Tanks	25.95
The Time Machine	25.00
VG Augusta Course	18.00
Virtual Golf	31.50
Wavelength	13.50
Wolfenstein 3D	29.95

CD-Rom Business & Utilities

Address IT	198.99
All Fonts	29.74
Arm Club PD CD 1	19.00
Arm Club PD CD 2	15.00
Artworks	104.69
Artworks ClipArt 1	20.08
Artworks ClipArt 2	20.08
ArtWorks Tutorial Video	18.99
Bitfolio 7	42.74
Digital Symph. Samples	23.75
Font Emporium	29.95
Grafix CD 1, The	19.95
Hyperstudio (Home)	111.56
PDCD4 (Datafile)	15.00
PDCD5 (Datafile)	15.00
PublishArt 3 Clipart (+FD)	39.95
ProArtisan 2	98.93
Risc Disc Vol.1	15.00
Risc Disc Vol.2	20.00
Risc Disc Vol.3	25.00
Rob Duncan Cartoon Kit	42.74
Task Force Clip Art	33.20
Tekkie Disc (PRM's etc)	47.50
Typography	45.00
Zenta Clip Art Collection	29.95

CD-Rom Education

Ancient Egyptians	42.30
Ancient Lands	50.53
Anim Talking Alphabet#	33.43
Being a Scientist	42.30
British Isles from the Air	42.30
British Countrysides	42.30
Cars - Maths in Motion	58.69
Castles	42.30
Counties of British I. (NK)	42.30
Countries of the World(NK)	42.30
Crystal Rain Forest 2	50.17
Dangerous Creatures	50.53
Dinosaurs	50.53
En Route	89.29
Era of the 2nd WW (PB)	81.08
Eureka Discoveries & Inve'	42.30
Frontier 2000	58.69
Garden Wildlife	42.30
Granny's Garden	39.95
Guardians of Greenwood	58.16
Hutchinson's Encyclopedia	52.82
Illustrated Shakespeare	29.32
Industrial Revolution (IK)	116.32
Industrial Revolution (NK)	95.17
John Cabot & Merchant V.	42.30
Journeys into History	100.45
Kingfisher Micropedia	76.38
King Arthur	58.69
Kiyeko with Acorn reader	36.43
Life & Living Process. (PB)	81.08
Map Detectives	50.17
Musical Instruments	50.53
My 1st Incrd. Amaz. Dict.	41.13
Nelson & the Brit. Navy	52.87
Number Time 2	28.99
Oxf. Talking Infant Atlas	22.32
PB Bears Birthday Party	41.13
Perspectives Franca. (PB)	81.08
Photography	42.30
Primary Web	37.00
Rocks, Min's & Fosl's (PB)	81.08
Romans	42.30
Science Explorer	66.96
Seashore Life	42.30
Secondary Web	37.00
Settlements (PB)	81.08
Science In Action	13.73
Space Exploration	13.73
Survival: Mysteries of Nat.	42.30
The Way Things Work	50.53
Tizzy's Toybox	44.65
TOTS TV	19.95
Ultimate Human Body	50.00
Understanding Energy	52.87
Understanding the Body	42.30
Vikings	42.30
Water (Picture resource)	13.73
World of Robert Burns	93.94
World Population Atlasfile	37.01
World's Weather, The	52.87
WW2 home front (NK)	26.43

CD-Rom Games

Abuse	25.00
Ankh	25.00
Crystal Maze	28.45
Doom Trilogy	35.00
Dune II	31.50
Simon the Sorcerer	32.40
Syndicate	29.00
Wizards Apprentice	24.95

1500 titles Available!!

Some dealers may not stock some titles

Minimum delivery charge normally £ 2

Credit Cards and Official Orders welcome
E&OE
All Prices Include VAT @ 17.5%

Key :

NRPC Not for RPC
NK Needs Key+
IK Includes Key+
PB Picture Base
WS's Worksheets
† Separate RPC version available

Please note many titles have been abbreviated for the advert

Revision 7c

Order from a participating dealer

Desktop Projects
Tel 0161 474 0778 Fax 0161474 0781
email sales@desktopp.demon.co.uk

Davyn Computer Services
Tel 01924 254800 Fax 01924 254036
email sales@davyn.demon.co.uk

Beebug
Tel 01727 840303 Fax 01727 860263
email sales@beebug.co.uk

CJE Micro's / NCS
Tel 01903 523666 Fax 01903 523679
email sales@cje.co.uk

Liquid Silicon
Tel 01592 592265 Fax 01592 596102
email liquid@cableinet.co.uk

CTA Direct
Tel 01942 511000 Fax 01942 749325
email sales@cta.u-net.com

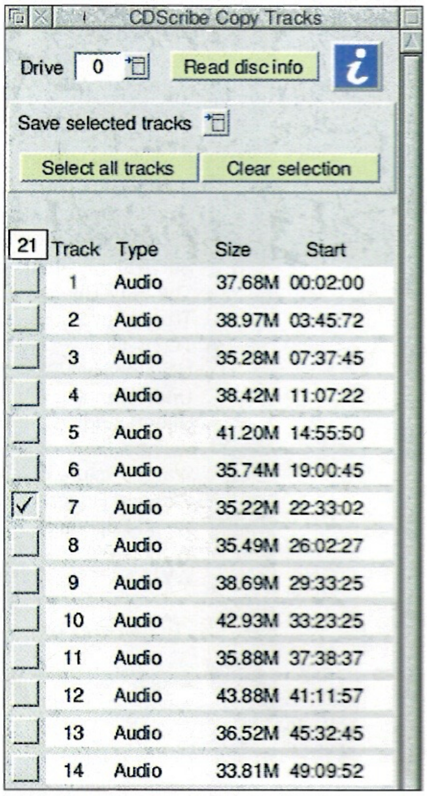
Uniqueway
Tel 01222 464020 Fax 01222 440071
email sales@uniqueway.co.uk

The Data Store
Tel 0181 460 8991 Fax 0181 313 0400
email sales@datstore.demon.co.uk

relatively well-designed, and feel as easy to use as those of *!CDBlaze*. When the software is first installed on the iconbar, a click on the icon will display the Copy Tracks window, from where you can select audio tracks to copy to your gold disc. The tracks are then saved to disc as a set of image files, which can then be dropped in the main Track List window, where the writing takes place.

Various options along the top of the window determine whether or not you wish to leave the disc open for future additions, or to close it permanently. The manual does state that multi-sessioning has a drawback in that *!ISOForm* does not know how to read the information required to add sessions, so the CD would have to be taken to another platform which uses a true multi-session ISO formatter. This is a glaring omission on what is otherwise a very stable piece of software.

At present, this software does not like my Morley/AISystems SCSI card, but I'll give you details of how I progress in next month's issue, and reserve my judgement until then.

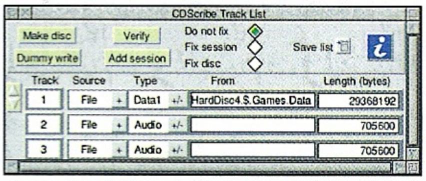


Drive 0

Save selected tracks

21	Track	Type	Size	Start
☐	1	Audio	37.68M	00:02:00
☐	2	Audio	38.97M	03:45:72
☐	3	Audio	35.28M	07:37:45
☐	4	Audio	38.42M	11:07:22
☐	5	Audio	41.20M	14:55:50
☐	6	Audio	35.74M	19:00:45
☑	7	Audio	35.22M	22:33:02
☐	8	Audio	35.49M	26:02:27
☐	9	Audio	38.69M	29:33:25
☐	10	Audio	42.93M	33:23:25
☐	11	Audio	35.88M	37:38:37
☐	12	Audio	43.88M	41:11:57
☐	13	Audio	36.52M	45:32:45
☐	14	Audio	33.81M	49:09:52

!CDScribe allows easy copying of audio tracks, by ticking the required items



● Do not fix
◇ Fix session
◇ Fix disc

Track	Source	Type	From	Length (bytes)
1	File	Data1	HardDisc4.$.Games.Data	29368192
2	File	Audio		705600
3	File	Audio		705600

The main window of *!CDScribe* provides track layout and the chance to perform dummy writes with your data

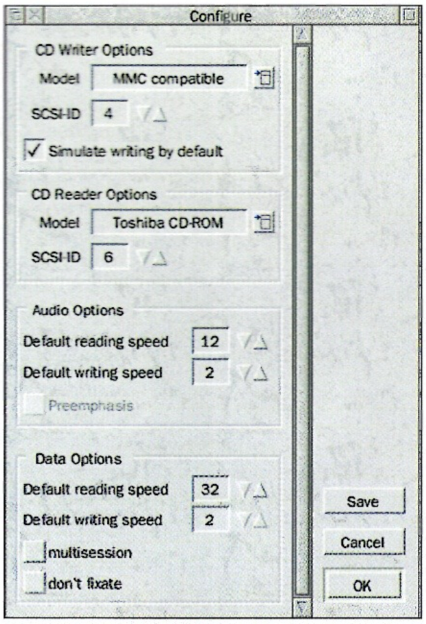
!CDBurn

This offering from Warm Silence Software has been in development since 1996. The software has only recently introduced multi-sessioning, albeit in beta form. Therefore, this version (1.28) is officially unstable, until the next release. What WSS have done however, is also provide a copy of the previous stable version, so that the user has a choice of which version to use. Upgrades are free of charge, and require the return of the original disc.

The program includes a copy of *!CDFix*, which applies a patch over Acorn's CDFS module, and *!FakeCD* which allows you to perform dummy writes. This is installed in the boot sequence, and when run, lets you configure any number of 'virtual' drives, which will appear on the iconbar upon rebooting. These virtual drives are totally transparent in use, and were even detected under *!CDBlaze*, as well as *!CDBurn*.

The software is copied to hard disc and run from there. Copy protection is not used, so you can make many copies across, say, a local network. Instructions are provided as a text file on disc, and is well written, if a little too technical for my liking.

Before any use can be made of the software, it must be configured to know where the drives are. This is done from the icon bar menu whereupon selecting Configure brings up a window stipulating which drive is the writer, which drive is the reader, and a set of options to determine the default read/write speed for audio and data discs. The default values are fine for most users' needs. *!CDBurn* currently



CD Writer Options
Model: MMC compatible
SCSI-ID: 4
☑ Simulate writing by default

CD Reader Options
Model: Toshiba CD-ROM
SCSI-ID: 6

Audio Options
Default reading speed: 12
Default writing speed: 2
☐ Preemphasis

Data Options
Default reading speed: 32
Default writing speed: 2
☐ multisession
☐ don't fixate

!CDBurn's Configuration window

CD-ROM Standards

The compact disc has evolved through various formats since Philips and Sony unveiled the system in the early 1980s. These formats are known as 'Book' standards, and were differentiated by the colour of the actual proposal folder when it was unveiled.

Red Book: defines the format of most regular music CDs sold today.

Orange Book: describes Compact Disc Magneto Optical (CD-MO). Data can be written, erased then rewritten again. CD-MOs are incompatible with CD-R drives. A later revision of this standard eventually defined today's CD-R disc, followed by the CD-RW disc.

White Book: used to define Video CDs, which combine full-motion video and audio, typically compressed to the MPEG-1 standard.

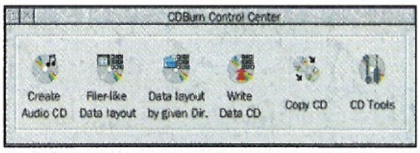
Yellow Book: this standard added a means of error detection during the writing process. The problem with formats such as Red Book was that without error checking present, you couldn't be sure if computer data was being written successfully onto the CD. Yellow Book solved this problem by breaking down Red Book's 2532-byte blocks into several sections, including sync and header areas, a 2048-byte data segment and error detection/correction codes.

Orange Book: this standard came on the back of CD-ROM/XA (the XA stands for extended architecture) and was introduced to allow audio and data to be interleaved onto one CD. Orange Book was proposed by Kodak and Philips, for the then new PhotoCD specification. Orange Book added the ability to add more than one session to one CD. You didn't have to write the disc in one sitting. You could add to it in a later session.

Green Book: this standard defines the specification for Compact Disc Interactive (CD-I), unveiled by Philips for their CD-Interactive (CD-I) system. The format stores data, graphics, still video, full motion video and audio.

Blue Book: also known as Enhanced CD or CD Plus, this is an update to the CD-ROM/XA/Orange Book standard, whereby inserting the disc into an audio device, such as a hi-fi, would play audio tracks as desired, but when accessed on a computer would instead bring up the data portion of the disc. Many CD singles now include 'interactive' tracks, so you can view the lyrics, or access a link to a website based around the artist concerned. This data track cannot be accessed by conventional CD players. Mixed Mode CDs, which are otherwise similar to Blue Book discs, allow this track to be played on hi-fis. Doing this however, will probably destroy your speakers!

Joliet: this format was created by Microsoft, to replace the problem they themselves initiated. Instead of the restrictive ISO 9660 standard (see other panel) which stores filenames in DOS form (i.e. less than 11 characters), Joliet allows for long filenames and directory names, and works under Windows 95 and 98.

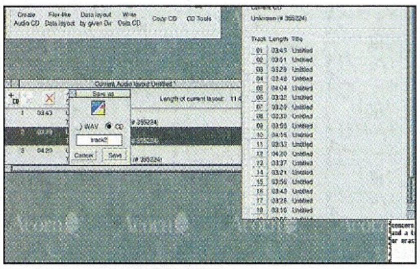


The Control center window of *!CDBurn*

supports a limited number of drives. If your drive is not listed in the Configure window, then you can select the MMC Compatible option, which will attempt to communicate with your drives.

MMC is a supposed industry standard, which every drive should understand. More drives will be supported in the future, although the author states this can only be done if the manufacturer releases their specifications and programming guides. This is the case with all the software; support will arrive only when the manufacturer allows it.

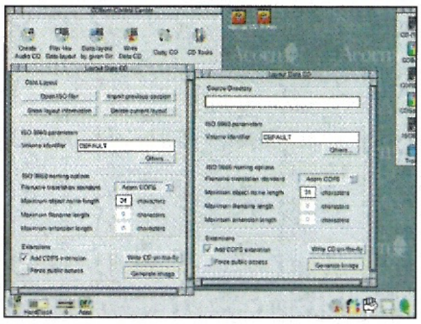
A click on the *!CDBurn* icon displays the Control center window, containing six icons, concerning audio CD creation, data layout, data writing, direct disc copying, and a toolbox for the finer operations, such as single audio track extraction, or erasing rewritable discs.



Creating an audio CD within *!CDBurn*

Audio disc creation consists of two windows, one showing the layout of the tracks to be written on the disc, the other window displaying the audio tracks from the original CD. A database feature here allows you to enter the names of tracks, so that when the disc is used again for copying, a list of named and identifiable tracks will be displayed.

By clicking Select (for single track selection), or Adjust (to choose more than one track) in this latter window, the selected tracks get added to the Audio layout window. You can then select a track and save it to disc in either Wave format or CD format. The latter is a raw data format and saves more quickly than Wave export, but both are alike in using lots of disc space. When a layout is finalised, you can save the image file to disc, and burn the CD either as a full write, or a simulated one.



The two data layout windows – one is for dragging and dropping files, while the other is for dropping in complete directories

Data layout can be done in two forms, either as a drag and drop process, or by dragging a directory to the layout window. The former allows you to open previous sessions, show layout information, and open a special ISO filer window, which will automatically convert filenames to ISO standards. It is up to the user whether they wish to create a true cross platform disc, or one which includes CDFS bells and whistles.

The Copy CD window enables you to do a direct copy of a given CD, whether it is an audio or data disc. You can specify the speed at which to write, in case the reader drive is slower than the writer, which would otherwise result in errors (and a wasted disc).

With each of the above windows, you can perform a dummy write at any time, and simulate the virtual disc to check for errors. This is where *!CDFaker* is especially useful, as you can determine whether any files attempt to save to the CD, resulting in error messages, whether directories are nested too deeply, or whether filenames have been truncated by the ISO standard.

In its use and appearance, I find *!CDBurn* a nicer experience. The windows are clearly laid out, and minimal in design. Despite my loathing for online documentation, I find the manual interesting to read, although as I stated before it can be technical in places. This probably reflects the desire of most Acorn users to know exactly what is going on when the software and drive are in operation. In direct contrast, the Cumana approach would be simplified if the paper-based manual is improved further.

Conclusion

Next month, I will perform some test burns using these drives, and give my final verdict on the software and hardware. The accompanying panels explain what some of the terms mentioned actually mean, and the new *Acorn User* website will soon contain more detailed information on the subject. AU

Product details

See Cumana's special offer on page 92

Drive prices shown are for external SCSI only. The Plasmon and Yamaha prices are direct from the manufacturer

Product: !CDBurn
Price: £49.00 ex VAT (£57.57 inc VAT)
Supplier: Warm Silence Software
Address: PO Box 28, Woodstock, Oxon, OX20 1XX
Tel: 0585-487642
E-mail: info@wss.co.uk
WWW: http://www.wss.co.uk/

Product: Cumana 4x8x CD-R drive (4x write, 8x read)
Price: £399.00 ex VAT (£468.82 inc VAT) (price includes !CDBlaze software, but no PC software)

Product: !CDBlaze
Price: £79.99 ex VAT (£93.99 inc VAT)
Supplier: Cumana
Address: Whitegate, Dunmow Road, Hatfield Heath, Bishop's Stortford, Hertfordshire, CM22 7ED
Tel: 01279-730800
E-mail: sales@cumana.co.uk
WWW: http://www.cumana.demon.co.uk/ (Demo version available for download)

Product: Eesox 4x8x CD-R drive (4x write, 8x read)
Price: £379.00 ex VAT (£445.32 inc VAT) (price includes !CDScribe software, but no PC software)

Product: Eesox CD-Recorder Kit (includes Eesox SCSI card and software, 4x8x CD writer and !CDScribe software)
Price: £449.00 ex VAT (£539.33 inc VAT and carriage)
Supplier: Eesox
Address: Century House, 1st Floor, Market Street, Swavesey, Cambridge, CB4 5QG
Tel: 01954-208208
E-mail: sales@eesox.demon.co.uk
WWW: http://www.eesox.demon.co.uk

Product: Plasmon CDR480 (8x read, 4x write)
Price: £349.00 ex VAT (£410.07 inc VAT) (Price includes PC only software, and 1 CD-R disc)
Supplier: Plasmon (available from local dealers)
Tel: 01763-262963
E-mail: sales@plasmon.co.uk
WWW: http://www.plasmon.co.uk

Product: Yamaha CRW4260tx Value Pack (6x read, 4x write, 2x rewrite)
Price: £283.00 ex VAT (£332.52 inc VAT) (Price includes PC only software, 1 CD-R disc and 1 CD-RW disc)
Supplier: Yamaha (available from local dealers)
Tel: 01908-366700
E-mail: sales@yamaha.co.uk
WWW: http://www.yamaha.co.uk

spacetech
imaging technology

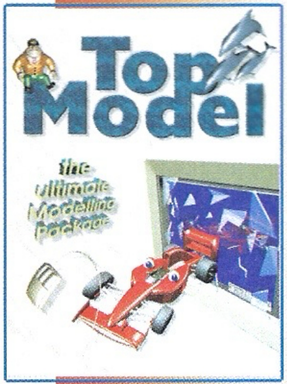
Studio Quality Products for the Full-time Graphics Professional and the Dedicated Enthusiast

PHOTODESK 3 is the **LAYERS** package which defines studio quality image editing and artwork on RISC OS machines. It is easy to use but has many powerful features, including **LAYERS** and a sophisticated colour management system (CMS) for the full-time graphics professional. Most of the extensive programming effort invested in this project has been concentrated upon ensuring a predictable user interface with an integrated design and most importantly, all operations have been engineered to the ***highest quality*** possible. **£299.50 (£254.89 ex VAT)**

PHOTODESK2 is still available, retaining the CMS but not layers, **now only £199.00 (£169.36 ex VAT)**

PHOTODESK3 LIGHT, an economic alternative to PHOTODESK3 retains most of its creative features apart from the Colour Management System, Layers and some features essential to the professional user. **£134.75 (£114.68 ex VAT)**

Plug-in Effects Packs are available for all Photodesk packages. Each pack contains 10 special effects: **£19.95 (£16.98 ex VAT)**



TopModel 2 the 3D editing package from Sincronia of Italy has been rewritten to include many new features including an easy to use interface and the fantastic **GEMINI** graphics engine.This package is particularly suited to artists and designers, because for the first time it is possible to model objects in a single 3D view. New features include texture, chrome and bump mapping, lens flare, up to 1024 light sources, fog & haze and many many more! **£152.75 (£130.00 ex VAT)**

New Version of TM2 at Acorn World including NEW CD-ROM and NEW plugins: TopMotion, the long awaited animation suite, and Top3DFonts!

NEW!
Olympus C840 L
1280x960
Only £599

PhotoLink is an Acorn multi-driver for the most popular makes of digital camera. Cameras currently supported include the **new Olympus** range including the fantastic **C840L.** and the **C1400L SLR Zoom** **"...if you buy a digital camera at all it should be an Olympus; personally I would also opt for the Spacetech driver"** *Richard Hallas, Risc User.* **"...the results from the Olympus/Spacetech combination are stunning . . .Spacetech's offering is by far the most comprehensive..."***Stuart Tyrrell, Acorn User.* Superb hard copy can be obtained via our **FotoFun** printer or Canon **PhotoReal** PhotoLink is available on its own at £69.00 or bundled FREE with a camera.

New Prices! **Olympus 420L £299.00 (was £499), C820L £499.00 (was £899), C1400L £999.00 (was £1299) (including VAT) C840L £599.00**

Photo Real
Printer Drivers for Acorn by Spacetech

PhotoReal is the Acorn driver extension for the **Canon BJC4300, Canon BJC4650, Epson Photo, Photo700 and EX** printers with photo-realistic capability. PhotoReal makes use of the same advanced techniques for producing high-quality four colour separations as Photodesk and comes ready calibrated for the special dye-based inks used for photo-realistic printing. A calibration application is also supplied to allow you to tailor the results to your own specification **Driver only £69.00 Inc.VAT. or FREE if purchased with printer! example: Stylus Photo700 + Driver £272.60 inc.VAT**

NEWS

New Epson Stylus700 Photo Printer + Driver £272.60

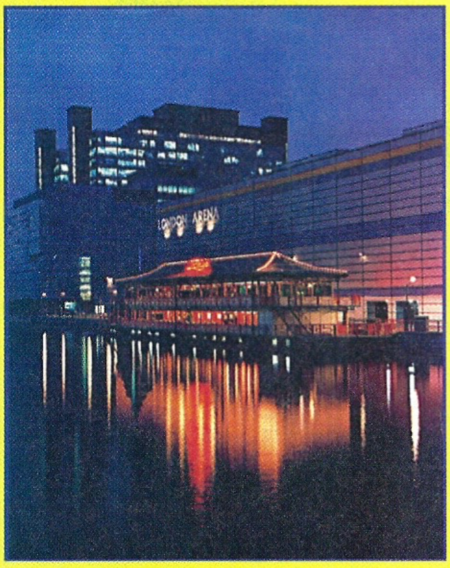
.... Photoreal drivers have now been updated... existing users please phone for free update.

PHOTODESK3 NOW SHIPPING!

Existing users have now upgraded! The retail pack will be introduced at Acorn World. There is now a revised pricing structure which means that Photodesk 2 is now cheaper :-) We will be in the Dedicated Graphics Stand at Acorn World and look forward to seeing you there!

Spacetech Ltd
The Courtyard, Southwell Business Park, Portland, Dorset, DT5 2JS, U.K.
Telephone: +44 (0)1305 822753 Fax: +44 (0)1305 860483
Email: sales@spacetech.co.uk Web : http://www.spacetech.co.uk

Acorn WORLD



London Arena, Docklands
16 - 18 October, 1998

http://www.argonet.co.uk/acornworld98/

Show highlights

Acorn World is the main event in the Acorn calendar and this year it is being held at a new venue – the London Arena.

Anyone who is anyone in the Acorn market will be exhibiting and it's your chance to get a hands-on look at new developments in hardware and software with the opportunity to buy products often at special show prices. What more of an incentive do you need to buy your ticket NOW ready for the biggest and best Acorn show in the world!

If you've been to Acorn World before, as many of you have, you'll find that much thought has been put in to making the exhibition even more exciting than previous years. Several stands have been specially dedicated to particular subject areas which will help you get the most out of your day at the show. Here are some highlights not to be missed: ➤

OPENING TIMES

Friday 16 and Saturday 17 October
10.00 - 18.00
Sunday 18 October 10.00 - 17.00

TICKET DETAILS

	On the door	In advance
Adults	£9.50	£6.00
Minors (under-16)	£7.00	£5.00
Families (2 adults & 2 children)	£22.00	£16.00

Please note that a booking fee of 90p per ticket will be applicable on all advance ticket purchases

Ticket Hotline number:
+44 (0) 171 538 1212

http://www.argonet.co.uk/acornworld98/

Travel and entrance packages

Make life easier for yourself by taking advantage of a special transport and entrance package arranged for Saturday 17 October only.

The following is a provisional list of starting locations, along with the price for the combined travel and entrance package: Bristol, £15. Ipswich, £13. Oxford, £13.50. Manchester, £23. Milton Keynes, £13.50. Derby, £18. Wakefield, £22. Welwyn Garden, £13.

Prices are based on a coach of 30 people travelling on the Saturday. Where there's not sufficient numbers to fill a coach, coaches may be combined and then pick up at multiple locations en route.

Booking details and availability can be found on the AAUG website (http://www.argonet.co.uk/scs/AAUG) or ring Neil Spellings on 0171-451 1960 for further details.

Free admission

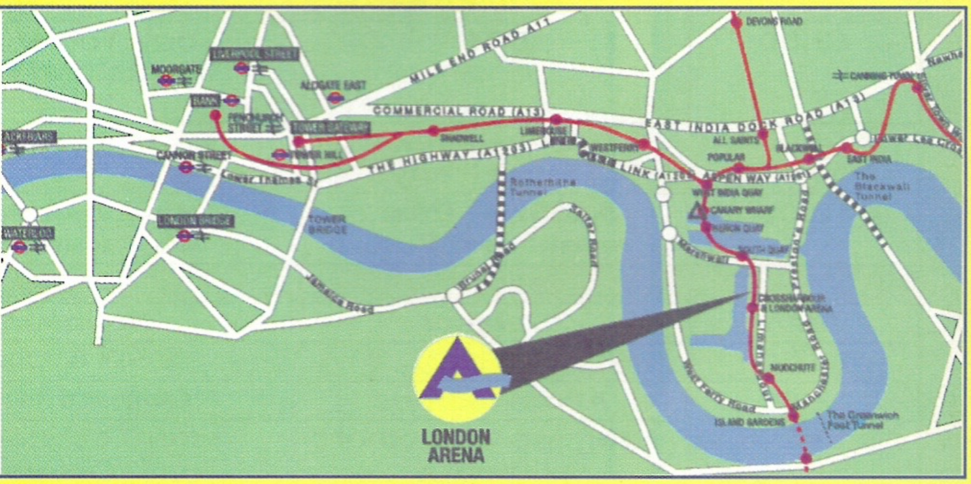
Acorn are looking for volunteers to help 'police' the Acorn Museum. This will involve donating 2 or 3 hours of your time at the show to 'stand guard' and in return you'll get FREE admission (AAUG members only).

If you fancy helping out contact Neil Spellings on 0171-451 1960 or e-mail him at aaug@argonet.co.uk. There's only a limited number of places available and these will be issued on a first-come first-server basis. If you've already bought your ticket you'll get a refund.

TRAVELLING TO THE LONDON ARENA

The London Arena is at the heart of London's Docklands and has its own Docklands Light Railway station. From Bank station in Central London it takes 15 minutes. The DLR also connects with the London Underground network at Tower Gateway, Stratford and Bow Church stations.

London City Airport is only three miles away. There is easy access to the M25 and it's a short walk from Greenwich and the Millennium Dome through the foot tunnel under the Thames from Island Gardens.


LIVERPOOL STREET
MOORGATE
ALDGATE EAST
BANK
FENCHURCH STREET
TOWER GATEWAY
TOWER HILL
CANNON STREET
BLACKFRIARS
LONDON BRIDGE
WATERLOO
TOWER BRIDGE
MILE END ROAD A11
COMMERCIAL ROAD (A13)
THE HIGHWAY (A1203)
EAST INDIA DOCK ROAD (A13)
ASPEN WAY (A1261)
SHADWELL
LIMEHOUSE
WESTFERRY
ALL SAINTS
POPLAR
BLACKWALL
EAST INDIA
DEVONS ROAD
CANNING TOWN
WEST INDIA QUAY
CANARY WHARF
HERON QUAY
SOUTH QUAY
CROSSHARBOUR & LONDON ARENA
MUDCHUTE
ISLAND GARDENS
Rotherhithe Tunnel
The Blackwall Tunnel
The Greenwich Foot Tunnel
Jamaica Road
Marsh Wall
West Ferry Road
Manchester Road
LONDON ARENA

Sponsored by

Acorn XEMPLAR EDUCATION

Supported by

The Daily Telegraph electronic Telegraph ACORN USER ARGO

Acorn Computers Ltd

Acorn will be demonstrating their two latest products. This is the first public viewing of the fastest EVER Risc PC – the long awaited Phoebe Risc PC 2. Prepare to be stunned by the speed...

Also being demonstrated on the stand is the Acorn thin client solution — the revolutionary thin client device that is setting the standard for the future of computing.

Acorn 20th Birthday Museum

It's Acorn's twentieth birthday this year and in the museum you'll see how far Acorn has come since its inception in 1978. There should be a working model of every major Acorn computer from the last twenty years. Alongside this *Acorn User* will be celebrating its 200th issue and you'll get the chance to see poster versions of front covers from the past issues that marked important events in Acorn's history.

So if you fancy reminiscing or you've never seen some of the earlier Acorn models this is your opportunity. For any Acorn enthusiast this is one place not to be missed.

Acorn User

It's our 200th issue so come and meet the AU team who will be on hand to answer your questions. We'll have back issues for sale and it's the best time to take out or renew a subscription as there'll be a special show deal. Make our stand your first stop.

Classroom of the Future

In the Classroom of the Future Xemplar and Acorn will be showing the only educational solution currently available in the UK for the NC. They'll also be showing a range of curriculum resources including *NC works* – a suite of productivity tools which have been tried, tested and installed in both primary and secondary school environments.

So go along to this area to see how this new ICT solution can provide schools with a long-term investment that will mean less reliance on new hardware and technology while improving network and staff efficiency and lowering the total cost of ownership.

Developers' Village

A new area specially designed for developers to show off exciting projects they are currently working on. Both familiar and new names will be exhibiting the software and hardware of the future in what is sure to be a particularly busy and vibrant area.

Games Arcade

A welcome return of one of the most popular features of any computer show – the games arcade. Representatives from Acorn Arcade – the specialist Acorn games website – are going to be running this feature and will be showcasing some of the latest games available for the Acorn platform, including the extremely popular futuristic flight-sim/blaster *Descent* and 3DO/New World Computing's stunning *Heroes of Might and Magic II* which combines fantasy and strategy.

Imaging Area

Four major companies – Akalat Publishing (of *Acorn Publisher* fame) Alternative Publishing, Astute Graphics and Spacetech Ltd. – with reputations in the imaging and publishing field are coming together in a "first" at this year's Acorn World with a joint stand complete with theatre.

The dedicated graphics stand represents a unique venture in the RISC OS graphics market. By bringing together such key companies, products and resources, every visitor with an interest in design and publishing, from logos to multi-thousand magazine print runs will want to make this stand their essential stop-off point.

So rather than having to trail from stand to stand asking questions about compatibility all your graphical needs can be fulfilled in one fell swoop! See individual company details for further info.

Argo Internet Cafe

Fancy a cuppa? Argo Interactive will be serving up both tea and coffee and advise on how to use and get more out of using the Internet for both business and pleasure.

Revelation Demo Party

Don't miss your chance to meet demo crews, talk coding and design and check out the latest releases. The party, hosted by John Stonier, will culminate in the demo competition with the winning prize of a Phoebe. So make your way to the theatre between 14.00 and 15.30 on Saturday afternoon to join the fun and cast your vote.

Technology Partners' Pavilion

And a show wouldn't be complete without a touch of 'glamour' and excitement so if this is what you're after head for the Technology Partners' Pavilion. Here you'll see how Acorn technologies are being licensed and embedded in products around the globe by companies such as Samsung, ETRI and the Funai Electric Company of Japan.

The User Group Village

The AAUG will be hosting the 'User Group Village' where visitors can obtain information on all the various Acorn user groups around the world plus details of some of the benefits of user group membership. Several of the more local user groups will also be on-hand to answer any Acorn-related questions or problems you may have.

Education Seminars Friday 16 October

Topics covered on Education day will be:

- The Network Computer – Technical Overview
- NCs in School
- Thin Client Networks
- Acorn Strategy
- All about Phoebe
- Lottery Training

Correct at time of going to Press. For full seminar details please check on the day.

Demo Theatre – Sat 17 & Sun 18 October

Saturday

Start	*Subject*	*Speaker(s)*	*Finish*
10.30	The Internet	IMS & Dalriada	11.45
12.00	DTP	Tony Tolver, Barry Rickets and Richard Hallas	13.45
14.00	The Revelation Demo Party	John Stonier	15.30
16.00	Acorn — Past, Present and Future	Chris Cox and other Acorn luminaries	17.45

Sunday

Start	*Subject*	*Speaker(s)*	*Finish*
10.30	Music	ESP & Clares	11.45
12.00	Acorn Games	RComp Interactive	13.15
13.30	Working with other platforms	Icon Technology & Clares	14.45
15.00	Acorn — Past, Present and Future	Chris Cox and other Acorn luminaries	16.45

Details correct at time of going to Press.
Please check on the day for changes to programme.

THE COMPANIES INVOLVED

4th Dimension
Stand 170
78 Brighton Road
Worthing
West Sussex BN11 2EN
Tel: 01903-213361
Fax: 01903-523679
E-mail: 4d@cje.co.uk
WWW: http://www.cje.co.uk/4d
Following their joining of the 'CJE fold' The Fourth Dimension will be launching two new games, *Supersnail* and *Morph*. *Supersnail* is the snail with attitude – bounce your way around, collecting coins and taking on various unusual enemies. *Morph* is a classic adventure game in the style of *Citadel* and has been over a year in the making.

ACD Press
Stand 124b
33 Blackbird Close
Bradwell
Great Yarmouth
Norfolk NR31 8RT
Tel: 01493-600966
Fax: 01493-442445
Email: acornnow@argonet.co.uk
WWW:
http://www.argonet.co.uk/users/acornnow
Acorn Now magazine. Acorn computer, design, print and publishing.

Acorn Computers Ltd
Stand 175
Acorn House
645 Newmarket Road
Cambridge CB5 8PB
Tel: 01223-725000
Fax: 01223-725100
E-mail: info@acorn.com
WWW: http://www.acorn.com/
See previous page.

Acorn User
Stand 61
Media House
Adlington Park
Macclesfield
Cheshire SK10 4NP
Tel: 01625 878888
Fax: 01625 879967
E-mail: editor@acornuser.com
WWW: http://www.acornuser.com/
See previous page.

AJS Computers Ltd
Stand 50
Unit 28 East Hanningfield
Industrial Estate
East Hanningfield
Essex CM3 8AB
Tel: 01245-400066
Fax: 01245-400014
E-mail:
sales@ajscomps.demon.co.uk
WWW:
www.ajscomps.demon.co.uk
Specialists in upgrades, part exchanges, second user equipment and repairs.

Akalat Publishing
Stand 95 (Imaging area)
P.O.Box 231
Barton
Bedford MK45 4HQ
Tel/fax: 01582-881614
E-mail: akalat@kbnet.co.uk
Akalat Publishing offers advice, help and solutions on all matters relating to dtp and image processing. The stand will feature *Acorn Publisher*, now in its fifth year of publication. The latest issue, which continues a major series on scanning and image processing, will be on sale together with back issues. There will also be a wide selection of books on dtp, typography, image processing and the Internet, plus the very popular *Task Force* clip art collection.

Aleph One Limited
Stand 60
The Old Courthouse
Bottisham
Cambridge CB5 9BA
Tel: 01223-811679
Fax: 01223-812713
E-mail: info@aleph1.co.uk
WWW:www.aleph1.co.uk/
Aleph One will show both their new *!PCPro 3* software for Risc PC Second Processor cards and a PCI-bus PC Card for Phoebe. *!PCPro 3* is important to all users, but games players will particularly appreciate its enhancements. This will also be the first chance to see what kind of support for Windows are available to Phoebe users.

Alsystems
Stand 65
47 Winchester Road
Four Marks
Alton
Hampshire GU34 5HG
Tel: 01420-561111
Fax: 01420-561100
E-mail: sales@alsystems.co.uk
WWW:
http://www.alsystems.co.uk/
Alsystems is a leading supplier of high quality disc solutions. This year we will be showing off a number of new products and driver utilities, including PowerZip PLUS, Writable PowerATAPI, our major new Ultra SCSI III PowerFLASH upgrade for the Cumana SCSI II card and PCI Ultra Wide SCSI III card for the new Phoebe computer.

Alternative Publishing
Stand 95 (Imaging area)
30 Clyde Place
Galsgow G5 8AQ
Tel: 0141-418 0881
Fax: 0141-418 0889
E-mail: sales@apsoft.co.uk
Alternative Publishing will be demonstrating software for graphical import/export, particularly *PostScript*, PDF and other image file-formats.

Anglia Multimedia
Stand 111
Anglia House
Norwich NR1 3JG
Tel: 01603-615151
Fax: 01603-631031
E-mail: enquiries@anglia.co.uk
WWW:
http://www.angliainteractive.com
Anglia Multimedia will be showing their two new releases for the Acorn platform – *Ancient Greeks* for Key Stage 2 and *Houses and Households*, a bi-lingual product in English and Welsh. Also on show will be *Anglia Interactive*, the on-line curriculum content service with a free version of *Fresco*.

Archimedes Public Domain Library (APDL)
Stand 144
39 Knighton Park Road
Sydenham
London SE26 5RN
Tel: 0181-778 2659
Fax: 0181-488 0487
E-mail: info@apdl.co.uk
WWW: www.apdl.co.uk
APDL will have the usual goodies, including a new version of their fast IDE interface, several new CDs, incredible hard disc and CD deals, and the long awaited printer Syquest SparQ 1Gb drive at a special introductory price. Plus some new hardware and software projects you won't want to miss.

Archimedes World magazine
Stand 59
Nexus Media
Azalea Drive
Swanley
Kent BR8 8HU
Tel: 01322-660070
Fax: 01322-667633
E-mail:
100126.103@compuserve.com
Come to see us and seize one of our great subscriptions offers, which include extra issues and the choice of a free game or CD-ROM. Browse a selection of back issues and catch upon the cover discs and supplements you may have missed.

Archive Publications
Stand 180
18 Mile End Road
Norwich NR4 7QY
Tel: 01603-766922
Fax: 01603-460736
E-mail: paul@archivemag.co.uk
WWW:
http://www.archivemag.co.uk/
Get the next two issues of *Archive* ABSOLUTELY FREE OF CHARGE! If you have never subscribed to *Archive* before, you can have the next two issues free on the understanding that, if you decide to take out a subscription, those two issues count as two of the twelve issues you get for £25.

ArgoNet
Stand 115
7 Dukes Court
Chichester
W Sussex PO19 2FX
Tel: 0500-585586
Fax: 01243-815805
E-mail: info@argonet.co.uk
WWW: www.argonet.co.uk
ArgoNet are demonstrating their extensive range of Internet services as well as hosting the Internet cafe. We've two spectacular show offers – whether you're on the Net or not we will give you the chance to secure a domain name before it's taken by someone else. Plus take advantage of our special deal on the Surf at Speed Pack (56K).

ArgoSphere
Stand 115
7 Dukes Court
Chichester
W Sussex PO19 2FX
Tel: 01243-815815
Fax: 01243-815805
E-mail: info@argosphere.net
WWW: www.argosphere.net
ArgoSphere, the award-winning educational website, continues to expand its range of free activities for children. Children are also encouraged to submit their work for publishing within ArgoSphere. When used offline, ArgoSphere is a safe Internet site which makes learning fun at school or at home.

Association of Acorn User Groups
Stand 155
Flat 5
19 Normanton Road
South Croydon
Surrey CR2 7JU
Tel: 0171-451 1960
Fax: 0171-451 8045
E-mail: aaug@argonet.co.uk
WWW:
http://www.argonet.co.uk/scs/AAUG/
See previous page.

Atomwide Limited
Stand 60
7 The Metro Centre
Bridge Road
Orpington
Kent BR5 2BE
Tel: 01689-814500
Fax: 01689-814501
E-mail: paul@atomwide.co.uk
WWW:
http://www.atomwide.co.uk
Atomwide will be demonstrating its range of cross-platform network services and solutions, hardware products and training courses. Featuring this year will be Acorn NCs and various 'thin-clients' accessing Microsoft's new NT4 Terminal Server. Plus of course, there will be Acorn's new Topcat NC support software, Phoebe(!), and NGfL discussions aplenty!

BEEBUG Limited
Stand 45
117 Hatfield Road
St Albans
Herts AL1 4JS
Tel: 01727-840303
Fax: 01727-860263
E-mail: info@beebug.co.uk,
sales@beebug.co.uk,
ruser@beebug.co.uk
Acorn's new computer, Phoebe, will be demonstrated by BEEBUG at Acorn World, and we expect to have a number of special offers available combining the computer and software/hardware.

We'll also be demonstrating *Ovation Pro*, and showing how it integrates with *Sleuth 3* and *Impact*. *RISC User* – produced using *Ovation Pro* – is now in its 12th year and we'll have the latest issue and disc available, as well as a selection of back issues. Not forgetting our normal ranges of software and hardware for the entire Acorn market – get in touch!

Cannon Computing and Cumana
Stand 40 and DV7
Whitegate
Dunmow Road
Hatfield Heath
Bishop's Stortford
Herts, CM22 7ED
Tel: 01279-730800/900
Fax: 01279-730809
E-mail: sales@cumana.co.uk or
sales@cannonco.demon.co.uk
WWW:
www.cumana.demon.co.uk
At this years' Acorn World show Cumana will be showing the latest in PCI SCSI development for the Phoebe. We will also have on show Digital Video Drives (DVD), Cumana's *!CDBlaze* CDRW software and a range of Parallel port devices.

Cannon Computing as one of Acorn's largest dealer will be showing the latest in the Acorn's product range with many special offers available from the stand.

Castle Technology
Stand 146
Ore Trading Estate
Woodbridge Road
Framlingham
Suffolk IP13 9LL
Tel: 01728-621222
Fax: 01728-621179
E-mail: Sales@castle-technology.co.uk
WWW: http://www.castle-technology.co.uk
We will be demonstrating our range of hardware for all Acorn computers. From scanners to hard drives and mice to memory, we will have special show prices and large stocks available. Also on show and available to buy will be the new Acorn computer Phoebe. We look forward to seeing you at Acorn World '98.

Circle Software
Stand 53
P.O. Box 36
BODMIN PL30 4YY
Tel/fax: 01208-850790
E-mail:
sales@circlesw.demon.co.uk
Circle Software will be demonstrating their *Impact-3* database package, featuring a scrollable tool bar with user definable tools, and built-in support for Beebug's *Ovation Pro*. The combination of *Impact-3* and *Ovation Pro* now provides the best database report generation available on any platform.This winning combination will be available at a special package price, together with other special show deals.

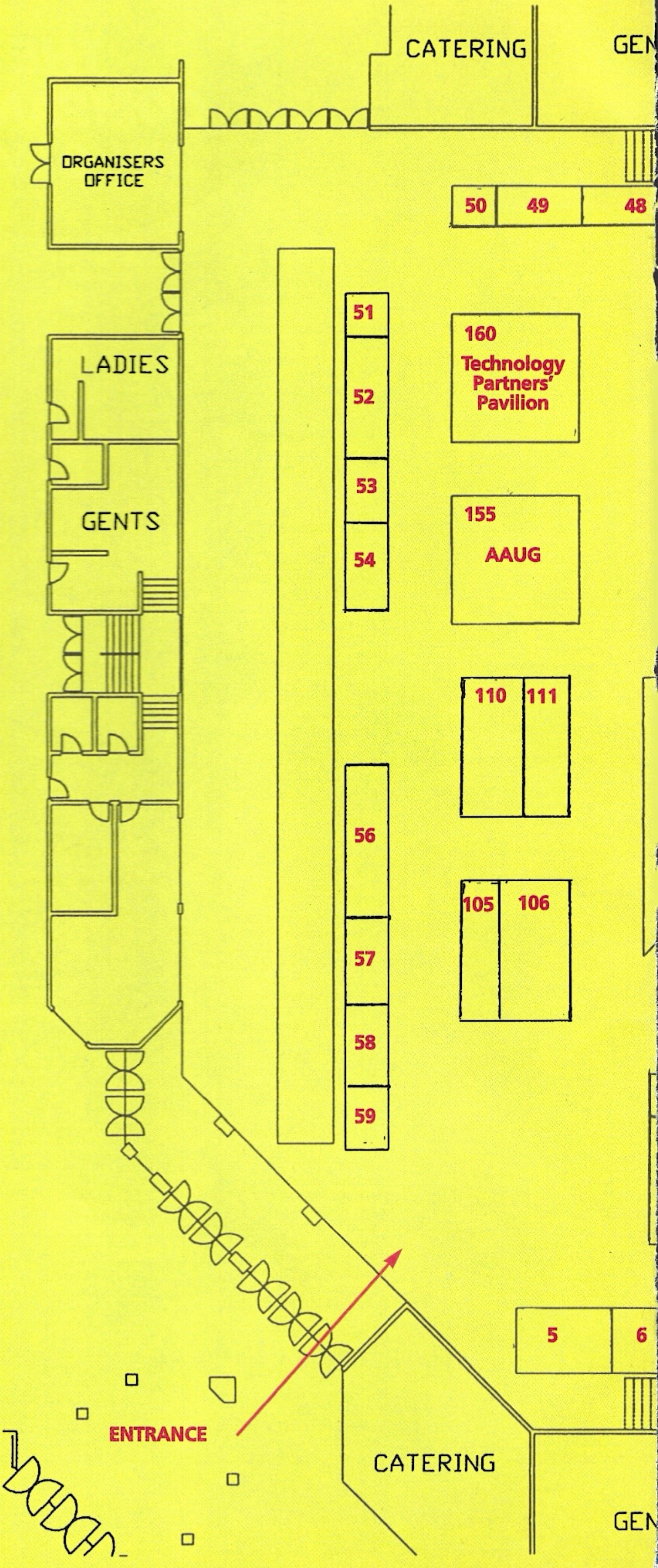
CJE Micro's/NCS
Stand 170
78 Brighton Road
Worthing
West Sussex BN11 2EN
Tel: 01903-523222
Fax: 01903-523679
E-mail: sales@cje.co.uk
WWW: http://www.cje.co.uk/
CJE will be displaying their wide range of everything Acorn-related. With special offers and a number of NEW products.

Clares Micro Supplies
Stand 125
98 Middlewich Road
Northwich
Cheshire CW9 7DA
Tel: 01606-48511
Fax: 01606-48512
E-mail: sales@clares.demon.co.uk
WWW:

➤ page 58

FLOOR PLAN

LONDON ARENA DOCKLANDS
16–18 Oct 1998



LIST OF EXHIBITORS

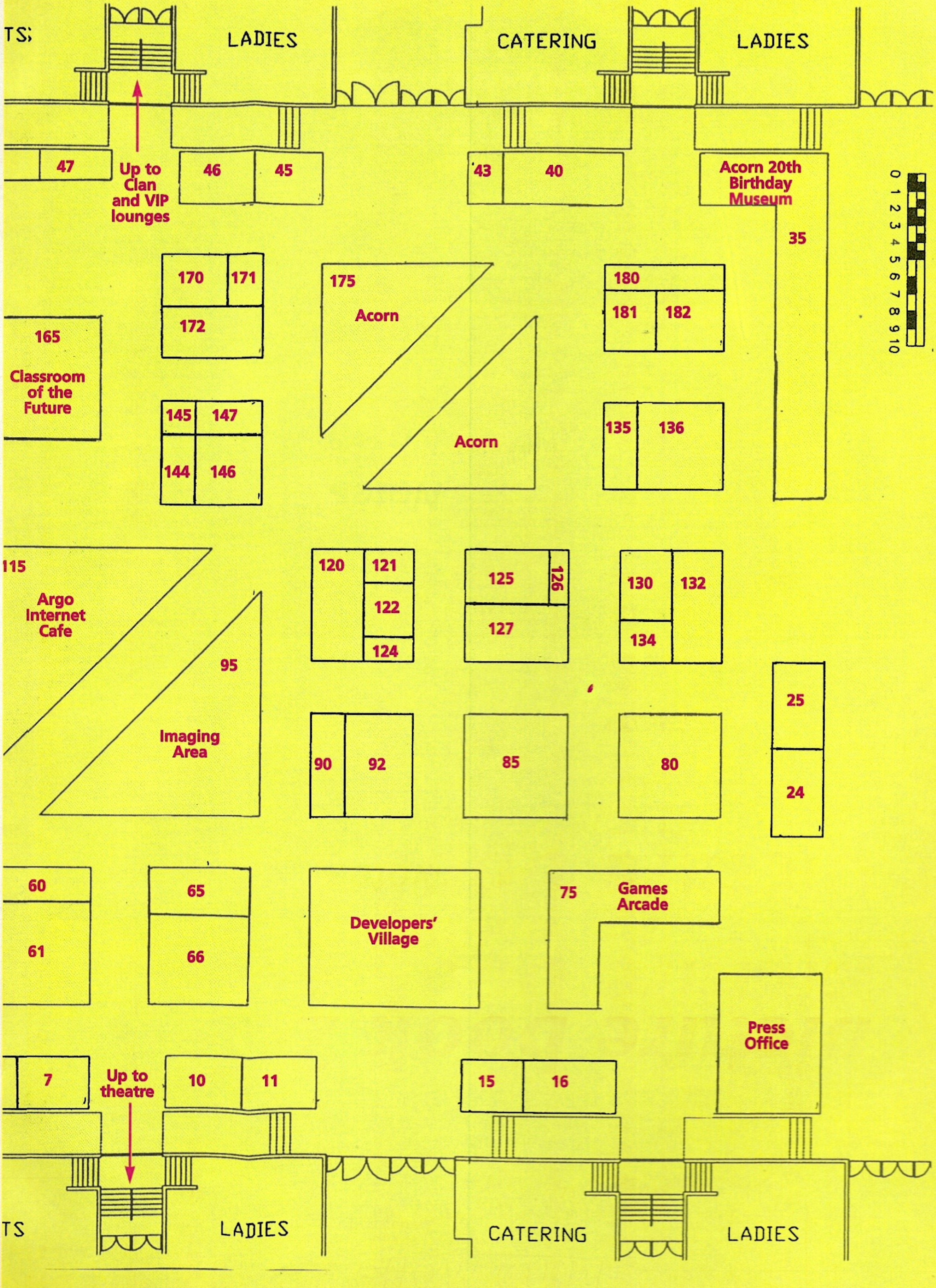
4th Dimension	170
ACD Press	124b
Acorn Computers Ltd	175
Acorn User	61
AJS Computers Ltd	50
Akalat Publishing	95 (Imaging area)
Aleph One Limited	60
Alsystems	65
Alternative Publishing	95 (Imaging area)
Anglia Multimedia	111
Archimedes Public Domain Library (APDL)	144
Archimedes World	59
Archive Publications	180
ArgoNet	115
ArgoSphere	115
Atomwide	60
BEEBUG Limited	45
Cannon Computing	40 (& DV7)
Castle Technology	146
Circle Software	53
CJE Micro's/NCS	170
Clares Micro Supplies	125
CTA Direct	105
Cumana	40 (& DV7)
Daco Systems Limited	90
Dalriada Data Technology	147
Davyn Computer Services	145
Desktop Projects Ltd	130
Eesox	181
Electronic Telegraph	105
Explan Comp Ltd & MW Software	57
Fabis Computing	147
Graphics and Imaging area	95
Icon Technology Limited	43
Innovative Media Solutions Ltd	58
Irlam Instruments Ltd	135
iSV Products	tbc
Micro Laser Designs	tbc
Pineapple Software	120
Project Avante	95 (Imaging area)
R-Comp and RCI	15
Sibelius Software	170
Si-Plan Electronics Research Ltd	51
Smart DTP	tbc
Softease Limited	171
Spacetech	95 (Imaging area)
TECS	124
The ARM Club	155
The Electronic Font Foundry	6
Uniqueway	121
Warm Silence Software Ltd	126

SPECIAL AREAS

Acorn 20th Birthday Museum	35
Argo Internet Cafe	115
Classroom of the Future	165
Games Arcade	75
Imaging Area	95
Technology Partners' Pavilion	160
Samsung	
ETRI	
Funai Electric Company of Japan	
Association of Acorn User Groups	155

DEVELOPERS' VILLAGE

Cannon Computing	DV7 (& 40)
Creative Curriculum Software	DV13
Cumana	DV7(& 40)
Design IT	DV18
Electronic Control Services Nottingham Ltd	DV1
Fortran Friends	DV9
Intelligent Interfaces Ltd	DV10
Millipede Electronic Graphic	DV12
Quantum Software	DV8
Rheingold Enterprises	DV2
Serious Statistical Software	DV17
Stuart Tyrrell Developments	DV19
Topologika	DV11


TS;
LADIES
CATERING
LADIES
47
Up to Clan and VIP lounges
46
45
43
40
Acorn 20th Birthday Museum
35
0 1 2 3 4 5 6 7 8 9 10
170
171
172
175
Acorn
180
181
182
165
Classroom of the Future
145
147
144
146
Acorn
135
136
115
Argo Internet Cafe
120
121
122
124
125
126
127
130
132
134
95
Imaging Area
25
90
92
85
80
24
60
61
65
66
Developers' Village
75
Games Arcade
Press Office
7
Up to theatre
10
11
15
16
TS
LADIES
CATERING
LADIES

THE COMPANIES INVOLVED

http://www.stcoll.ac.uk/clares/
We'll be showing our full range of products, including sneak previews of future releases. There will be bargains galore in hardware and software for the RiscPC and Phoebe. If you are one of our many regulars then please bring proof of your customer number along with you (mailshot, invoice etc) and you could win one of our superb range of prizes including CD-ROM (a 32x drive not a disc!), SIMMs, software or hard drive.

Creative Curriculum Software
Stand DV13 (Developer Village)
5 Clover Hill Road
Savile Park
Halifax HX1 2YG
Tel: 01422-340524
Fax: 01422-346388
E-mail: ccs@argonet.co.uk
Creative Curriculum Software are showing their full range of educational software including *Magic Maths, Tanzania* and *Pupil Reporting Made Easy*. Also being demonstrated is the *One million Worksheets Series* which produces printed maths work and answer sheets for early years, primary and secondary.

CTA Direct
Stand 105
168 Elliott St
Tyldesley
Tel: 01942-511000
Fax: 01942-749325
E-mail: sales@cta.u-net.com
WWW: www.cta.u-net.com
We will be releasing our new Acorn mouse and trackball/mouse. In addition we have a wide variety of CD-ROM writers and re-writers, CD-ROMs, hard drives, memory for all Acorn machines including Phoebe, scanners, printers, monitors, interfi, modems, speakers, bargain software, consumables and many many special offers.

Daco Systems Limited
Stand 90
459-465 Warwick Road
Tyseley
Birmingham B11 2JP
Tel: 0121-706 8933
Fax: 0121-706 4306
E-mail: info@daco-systems.co.uk
WWW: www.daco-systems.co.uk
Daco have been developing a version of our school front end, *The Green Light*, for the Acorn platform giving seamless integration in both terms of looks and functionality of Acorns and PCs on a single network. Also the Acorn NC solution involving Windows NT Terminal Server will be on display at our stand with Acorns of all ages running Windows NT at real speed. As always we will be offering special discounts on printers to all show visitors.

Dalriada Data Technology
Stand 147
Tel: 01926-492459
Fax: 01926-492459
E-mail:
sales@dalriad.demon.co.uk
Dalriada will be releasing *TableMate Designer 2* at Acorn World – the fifth generation of their popular tablemaking package. There will also be a number of other projects nearing completion to see.

Davyn Computer Services
Stand 145

Design IT
Stand DV18 (Developer Village)
15 Woodlands Road
Wombourne
South Staffordshire WV5 0JZ
Tel: 01902-894775
Fax: 01902-894775
E-mail:
sales@dezignit.demon.co.uk
WWW:
www.dezignit.demon.co.uk
Design IT provides a range of products and services for schools including consultancy, Ethernet network design, installation and training. A wide range of software is available including teletext, control, transfer software for Amstrad/DreamWriter wordprocessors and conectivity software to Windows NT. For Education users this stand is well worth a visit.

Desktop Projects Ltd
Stand 130
Unit 2a Heapriding Business Park
Ford Street
Stockport SK3 0BT
Tel: 0161-474 0778
Fax: 0161-474 0781
E-mail:
info@desktopp.demon.co.uk
WWW:
http://www.desktopp.demon.co.uk
In addition to selling our normal range of products, we should be selling the new Phoebe Risc PC 2 as well as showing our *LinServer*, an economic fully-featured, no nonsense Internet/Intranet and file server for Acorn, NC and PC computers. We will also have on demo a Citrix WinFrame Server which allows any computer or NC to run Windows.

Eesox
Stand 181
Century House 1st Floor
Market Street
Swavesey
Cambridgeshire CB4 5QG
Tel: 01954-208208
Fax: 01954-208208
E-mail: info@eesox.demon.co.uk
WWW: www.eesox.demon.co.uk
Eesox are launching the first 5.2Gb DVD-RAM drive for the Acorn platform – come and see a demonstration. Eesox SCSI Card upgrade 1.04 with up to 50 per cent performance increase, available at the show, also PenPad Block driver upgrades. Plus CDWriters, CD-ROM drives, hard discs, Graphic Tablets, SCSI Cards all at special prices.

Electronic Control Services Nottingham Limited
Stand DV1 (Developer Village)
2nd Floor
107 Carlton Road
Nottingham NG32FB
Tel: 0115-979 9684
Fax: 0115-979 9685
E-mail: ecsltd@ecsltd.co.uk
WWW:
http://www.innotts.co.uk~ecsltd/
On show ECS hopes to have Phoebe running: *NewSaver* – an aid to quick saving work from any application, particularly useful for schools, it has been taken up by ESIS for all its Acorn training courses in Wales. *ECS-Presenter* – an easy-to-use presentation package with animations. *Puzzle Fixer* – make graded puzzles from any picture and *ECS-Utils* – a desktop utility suite with a difference.

Electronic Telegraph
Stand 105
1 Canada Square
Canary Wharf
London E14 5DT
Tel: 0171-538 7147
Fax: 0171-538 6158
E-mail:
et.newmedia2@telegraph.co.uk
WWW:
http://www.telegraph.co.uk
We are giving away free copies of *The Daily Telegraph*, free copies of *Connected* (Our Thursday IT supplement) and free copies of our *Connected Guides to the Internet*.

ExpLAN Computers Ltd & MW Software
Stand 57
PO Box 32
Tavistock
Devon PL19 8YU
Tel: 01822-613868
Fax: 01822-610868
E-mail:
explan@explan.demon.co.uk
WWW:
http://www.explan.demon.co.uk
ExpLAN are releasing their new *FuzzySheet* application. A spreadsheet like no other, it even permits input of indistinct information! Also for first time viewing and release is the Lion Electronic Library module for use within ExpLAN's multimedia *HolyBible* software. Mainly of interest to home and school users, it offers seven databases of textual commentary and background material, together with maps, timelines and photographs.
MW Software will be showing the new *HatchPro* add-on module for *ArtWorks*.

Fabis Computing
Stand 147
48 Charles Street
Church Gresley
Swadlincote
Derbyshire DE11 9QD
Tel: 01283-552761
Fax: 01283-552761
E-mail: info@fabis.demon.co.uk
WWW:
http://www.fabis.demon.co.uk/
Launch of *AddressIt*, address management software allowing access to every UK postal address. See the latest developments with *EasyClip* release 2 plus very special offers on *Recycler* – the recycler bin for RISC OS; and *EasyFont Pro* our ever popular Font Management System.

Fortran Friends
Stand DV9 (Developer Village)
PO Box 64
Didcot OX11 0TH
Tel: 01235-834357
E-mail: BCA@ISISE.RL.AC.UK
WWW:
http://www.acorn.com/developers/fortran/
We are demonstrating desktop compilation and running of Fortran programs using our extensive libraries. Come and see polyhedra in 2/3D and in stereo with the latest versions of our *!Stellate*, *!PolyNet* and *!PolyDraw*. Learn how to use them for all levels of education or just for fun. Discover entirely new polyhedra.

Icon Technology Limited
Stand 43
Church House
Church Street
Carlby
Lincs PE9 4NB
Tel: 01778-590563
E-mail:
mike@iconsupport.demon.co.uk
WWW:
http://www.iconsupport.demon.co.uk/
Icon technology will be showing the latest versions of *EasiWiter* and *TechWriter* which have the following improvements:
Reading and writing of Microsoft Word 8 documents (created using Office 97/98) as well as Word 6 & 7. Hypertext links in documents. Improved HTML, Save links, Cut & Paste HTML, Auto convert pictures to GIF's, Read and Write PNG graphics. Link documents with Drag & Drop. Extended colour control for backgrounds. Show offers will be available.

Innovative Media Solutions Ltd
Stand 58
Box Bush Farm,
West Wick,
Weston-s-Mare BS24 7TF
Tel: 01934-522880
Fax: 01934-522881
E-mail: sales@ims-bristol.co.uk
WWW: http://www.ims-cdc.demon.co.uk/
IMS will be showing their range of multimedia CD-ROMs, budget digital cameras, website editing software, and software to link Acorns to Psion & Geofox palmtops. They will also be demonstrating, and hopefully selling, the new RISC OS portable computer (codenamed Peanut) which is expected to be one of the high points of the show.

Intelligent Interfaces Ltd
Stand DV10 (Developer Village)
P O Box 80
Eastleigh
Hants SO53 2YX
Tel: 01703-261514
Fax: 01703-267904
E-mail: sales@intint.demon.co.uk
WWW:
http://www.intint.demon.co.uk
Intelligent Interfaces will be exhibiting in the Developer Village at the Acorn World Show. This is an opportunity for customers to discuss Intelligent Interfaces' established range of expansion cards, which includes the recently introduced Single Width I/O Card, and their future range, which includes a PCI 64 bit Parallel I/O card.

Irlam Instruments Ltd
Stand 135
Brunel Science Park
Brunel University
Kingston Lane
Uxbridge
Middlesex UB8 3PQ
Tel/Fax: 01895 811401
E-mail: sales@irlam.co.uk
WWW: www.irlam-instruments.co.uk
Imaging and multimedia products will be demonstrated including scanners, digital cameras, video digitisers and associated software.

The latest upgrade for the *Videodesk* non-linear video editing system is to be shown which now includes powerful titling and audio editing facilities.

A complete range of PCI interface cards for the new Phoebe will be launched at the show including Video Capture, Ethernet and high performance disc interfaces. Special offers will be announced at the show.

iSV Products
Stand tbc
86 Turnberry
Home Farm
Bracknell
Berks RG12 8ZH
E-mail: atimbrell@aol.com
WWW:
http://members.aol.com/isvproduct/
iSV Products is releasing a new version of the acclaimed *Typography* font CD which contains 2100 high quality fonts plus a number of bonus items. Upgrades are available on the stand. All of iSV's other publishing products will be available with a number of very special offers only available at the show.

Micro Laser Designs
Stand tbc

Millipede Electronic Graphic
Stand DV12 (Developer Village)
Cambridge House
Hargrave
Bury St Edmunds
Suffolk IP29 5HP
Tel: 01284-850594
Fax: 01284-850351
E-mail:
info@milliped.demon.co.uk
WWW:
http://www.milliped.demon.co.uk
Millipede hope to be able to provide a glimpse of our exciting new high resolution, very high performance 32 bit graphics processor board, specifically developed for the Phoebe PCI expansion bus. In addition we will have the latest versions of the APEX and AlphaLock videographics boards designed for broadcast video production.

THE COMPANIES INVOLVED

Pineapple Software
Stand 120
352 Green Lane
Ilford
Essex IG3 9JS
Tel: 0181-599 1476
Fax: 0181-598 2343
E-mail:
sales@pineaple.demon.co.uk
WWW:
http://www.pineaple.demon.co.uk

Pineapple will have their largest stock ever of Acorn-related products available at Acorn World '98. We will have new low cost scanners and special offers on all our usual products. There will be a fabulous new product for Phoebe which we hope to have on full demonstration and will be available free to everybody who orders Phoebe from Pineapple!

Project Avante
Stand 95 (Imaging area)
40 Primrose Close
Ross-on-Wye
Herefordshire HR9 7RN
Tel: +44 (0) 1989 567350
E-mail:
nick@astutegrfx.demon.co.uk
WWW:
http://www.astutegrfx.demon.co.uk/

The official launch of *Project Avante*, the future of vector graphic design and publishing on the Acorn, will be a highlight for many that visit the show. With an expected delivery date set at end 1998 at a price of £200+VAT, visitors will be the first to be able to place a deposit of £30 for the package which will attract a £15 deduction of the final cost.

Quantum Software
Stand DV8 (Developer Village)
35 Pinewood Park
Livingston EH54 8NN
Tel: 01506-411162
E-mail: sales@quantumsoft.co.uk
WWW:
http://acorn.cybervillage.co.uk/

We will be demonstrating our entire range of products, including for the first time our new product called *Nover*, a overwrite protection program that also performs historical backups for extra security when creating your masterpiece.

As webmasters of the award-winning Acorn Cybervillage website we will also be on hand to give practical demonstrations and advice on maintaining a major business site like the Cybervillage.

R-Comp and RCI
Stand 15
22 Robert Moffat
High Legh
Knutsford
Cheshire WA16 6PS
Tel: 01925-755043
Fax: 01925-757377
E-mail: rcomp@rcomp.co.uk or rci@rcomp.co.uk
WWW: http://www.rcomp.co.uk/

We'll be launching a new product, provisionally titled *SiteSeer* which will fetch, store, manage and display whole websites, or partial selections. There'll also be the latest updated versions of all the *HTMLEdit Studio* family of products, including *HTMLEdit v4+*, *Web Designer's Toolkit 2*, *WebSpell* and *WebsterXL*. Oh, and *SiteMaster*, of course.

On the RCI front, we'll be launching two new leisure titles – Interplay's smash hit futuristic flight-sim/blaster *Descent*, and 3DO/New World Computing's *Heroes of Might and Magic 2* – a visually stunning fantasy/strategy game. *PCSound Pro 2* will also be available, alongside the usual range of ESP music products, plus graphics tablets and other accessories.

Rheingold Enterprises
Stand DV2 (Developer Village)
7 Waterbridge Court
Appleton
Warrington WA4 3BJ
Tel: 01925-210657
Fax: 01925-860442
E-mail:
rheingold@cybervillage.co.uk
WWW:
http://www.cybervillage.co.uk/malibran/

Rheingold Enterprises will be demonstrating some of the many applications the company have developed for RISC OS computers, including *Vigil*, a multi-tasking debugger, and *SiteSeer*, a website grabber.

Serious Statistical Software
Stand DV17 (Developer Village)
Lynwood
Benty Heath Lane
Willaston
South Wirral L64 1SD
Tel: 0151-327 4268
E-mail: sss@argonet.co.uk
WWW: http://www.serious-stats.co.uk

Some powerful and wide-ranging techniques – both graphical and numerical – for analysing and interpreting practical data will be demonstrated. Our thoroughly established and unique statistical package *(1st)* has had new advanced features added recently. Orders taken at the show will attract 30 per cent discounts. We hope to renew acquaintance with many clients!

Sibelius Software
Stand 170
75 Burleigh Street
Auckland Road
Cambridge CB1 1DJ
Tel: 01223-302765
Fax: 01223-351947
E-mail: infoUK@sibelius.com
WWW: http://www.sibelius.com

Sibelius Software will be demonstrating their Award winning *Sibelius 7* music program, and associated extras including the ingenious Optical Manuscript Reader & sound output module.

Si-Plan Electronics Research Ltd
Stand 51
Avenue Farm Industrial Estate
Birmingham Road
Stratford-upon-Avon CV37 0HR
Tel: 01789-205849
Fax: 01789-415550
E-mail: adc@si-plan.demon.co.uk
WWW: si-plan.demon.co.uk

Si-Plan are demonstrating their analogue-digital/digital-analogue interface cards and software suite. These plug-in cards enable RISC OS machines to communicate with transducers measuring, for example, temperature, load and displacement. Data displays feature graphs, bars, DPMs and XY plots. Computers with these cards can also control applications and Si-Plan have some fascinating examples, including a machine which tests prosthetic feet. Si-Plan first used the BBC Micro – then its successors – and developed the ADC/DAC facility for industrial applications. The cards and software are now being made generally available.

Smart DTP
Stand tbc
36 Park Road
Duffield
Belper
Derbyshire DE56 4GR
Tel/fax: 01332-842803
E-mail: parrygroup@intecc.co.uk

Smart DTP will be launching their latest edition of *PublishArt* at this year's Acorn World show. *PublishArt* users will be able to upgrade at the special show price of £10. To upgrade don't forget to bring your old copy of *PublishArt* to the show!

Softease Limited
Stand 171
The Old Courthouse
St Peters Church Yard
Derby DE1 1NN
Tel: 01332-204911
Fax: 01332-609224
E-mail: sales@softease.co.uk
WWW: www.textease.com

The latest version of award-winning *TextEase Multimedia* will be on display and for sale. The latest version features the long-awaited full Undo/Redo ability. It also introduces 'lose' grouping of objects. 'Lose' grouping has all the benefits of grouping (eg scaling, rotation) but also allows full control over the individual members of the group. Confused? Well come to stand 171 and see it and pick up a bargain while you are there!

Spacetech Ltd
Stand 95 (Imaging area)
1 The Courtyard
Southwell Business Park
Portland
DT5 2JS
Tel: 01305-822753
Fax: 01305-860483
E-mail: sales@spacetech.co.uk
WWW:
http://www.spacetech.co.uk

You'll find us on the Dedicated Graphics stand this year with our new Layers version of *Photodesk 3* as well as the new Olympus digital cameras and PhotoReal printer drivers. Sincronia are also in attendance with a new version of *TopModel* and the new Plug-ins, *TopDeform*, *TopMotion*, *Top3Dfonts* as well as a new TM CD collection.

Stuart Tyrrell Developments
Stand DV19 (Developer Village)
PO Box 183
Oldham OL2 8FB
Tel: (Orange:) 0976 255 256
Fax: 0870 164 1604
E-mail: info@stdevel.demon.co.uk
WWW:
http://www.stdevel.demon.co.uk

Stuart Tyrrell Developments will be exhibiting for the first time at Acorn World as part of the developer's village. In addition to our current range of game, interface and access devices, you will be able to have an exclusive sneak preview of some of our "work in progress".

TECS
Stand 124
140 Busby Road
Clarkston
Glasgow G76 8BG
Tel: 0141 644 4952
Fax: 0141 644 5299
E-mail: rtodd@tecs.co.uk
WWW: http://www.tecs.co.uk

For this, our first visit to the Acorn World Show as exhibitors, we are going to offer a range of Acorn-related hardware and upgrades at some very special prices. We also intend promoting the 3rd Annual Scottish Show which takes place in Glasgow on the 8th November.

The ARM Club
Stand 155
The ARM Club
FREEPOST
London N12 0BR
Tel: 07010-709849
Fax: 07020-954018
Technical Help 0973 891330
Email: info@armclub.ork.uk
WWW:
http://www.armclub.org.uk/

The club hopes to have their next CD available in time for the show. We will have some new items for you to purchase so "Don't be a mug , Join the Club". Technical help will be available on the stand on all three days for club members. If you're not a member then why not come along and join at the show.

The Electronic Font Foundry
Stand 6
11 Silwood Road
Ascot SL5 0PY
Tel: 01344-875201
Fax: 01344-875202
E-mail: sales@eff.co.uk
WWW: www.eff.co.uk

Highest quality fonts and font-related products. Over 1,200 typefaces for over 50 languages on floppies or CD. Specialist and custom fonts. New releases (new font collection), promotions and special show prices on ALL products, including the best selling EFF1 *Professional Typography* CD and EFF *TrueTypeTranslator*.

Topologika Software
Stand DV11 (Developer Village)
Waterside House
Falmouth Rd
Penryn
Cornwall TR10 8BE
Tel: 01326-377771
Fax: 01326-376755
E-mail:
sales@topolgka.demon.co.uk
WWW:
http://www.topolgka.demon.co.uk

Topologika will be displaying their complete range of best-selling Acorn educational software including latest releases *Sherlock, the Text Detective* (great for Literacy Hour), *TinyArt* (easy-to-use primary art pack) and version 3 of *Desktop ScreenTurtle* ('Logo' without tears!). Products will not be on sale from our stand but we'll be taking orders, giving 15% discount and will be supplying post free.

We will also be asking 'classic adventurers' if they'd be interested in buying a CD compilation – if we did one – of all of the original Topologika text adventures: *Countdown to Doom, Return to Doom*, etc. So come on down and tell us!

Uniqueway Ltd
Stand 121
3 Clarendon Road
Cyncoed
Cardiff CF3 7JD
Tel: 01222-464020
Fax: 01222-440071
E-mail: sales@uniqueway.co.uk
WWW:
http://www.uniqueway.co.uk

Uniqueway will have its usual selection of show offers and will be taking advance orders for *The Risc Disc* Volume 4 CD. Also on sale will be a very useful *CD Test* CD and a first release of our *Traditional Christian Clip Art* CD. Finally we shall be launching the latest version of *RiScript Pro* which can read both Postscript and PDF files and includes a totally revamped user interface and lots more. There'll also be a reduced version, *RiScript PDF*, available for £25 which can handle PDF files only, and is not configurable.

Warm Silence Software Ltd
Stand 126
P.O. Box 28
Woodstock
Oxfordshire OX20 1XX
Tel: 01608-737172/0585 487642
Fax: 01608-737172
E-mail: info@wss.co.uk
WWW: http://www.wss.co.uk/

New releases include *MovieFS v2* (designed for use with Replay 3) and *LanMan98* (an extension to *Omniclient* that offers full long filename support with PC servers). New versions of *CDBurn*, *Dr Smiths C Development Toolkit*, and other software will also be available. Finally, the first demonstrations of *RealAudio* for the StrongARM Risc PC!

picture book 2

The fun way to discover words and numbers

Extra Features Lower Price!

- alphabook
- spell it
- word match
- count 'em
- flash card
- snap

Picture Book 2 makes reading, spelling and counting easy and enjoyable for all children The six Picture Book programs offer varied and interesting activities, and there is a phonic alphabet to help ensure correct pronunciation. A wide range of setting options allows each program to be matched to an individual child's ability.

This version of **Picture Book 2** also includes RGSC's **!AlphaEdit** utility to help you create your own alphabet files for use with the Picture Book programs.

Single user: ***£24.95*** *Site Licence:* *£95.00*

Picture Book 2 can be run on all Acorn RISC OS computers. Minimum system requirements are RISC OS 3.1 or later and 2Mb of memory.

Special Offer! Save £3 off the price of **Picture Book 2.** Send £2 for the **PB2 Demo** disk, to cover cost and postage, and pay **£19.95** when you order the full version. To save **£5** send us your copy of the *original* Picture Book program (BBC, Archimedes, Acorn versions) with your order.

Using **Notice Board** with Draw or ArtWorks and text files you can create colourful multiple-page, 'posters' and run them continuously on-screen. Widely used in schools for Open Day and class work presentations, and by businesses, **Notice Board** provides an ideal medium for the display of information at schools and exhibitions, in reception areas, libraries, etc. *For use with RISC OS 3.1 or later. Site licence £105.*

Single user ***£35.00***
Site licence £105.

Notice Board

"..for rolling presentations Notice Board excels."
Acorn User

Notes

The 'sticky note pad' for Acorn computers

Create notes, reminders, etc, on your computer for yourself and others. You can 'stick' Notes on to files or directories and have them appear at specific times on-screen, on starting up or when a file is opened. *Now only* ***£7.50***

Montage

Creative Fractal Art

Create your own stunning fractal art pictures with the **Montage** program. Working in interactive mode Montage builds the images as you work, fast! Requires minimum 2Mb, 4Mb for hi-res pictures.

Decidedly the most original and unusual package I have seen for a very long time...once you have digested the instructions, Montage is a fascinating and enthralling program." RISC User

Montage runs on Acorn machines (RISC OS 3.1 or later) and on the Risc PC.

Single copy: ***£35.00*** *Site licence £105.00*

MultiLink

Don't lose all your hard-won BBC data, use **MultiLink** to transfer data effortlessly between old Acorn 8-bit computers and RISC OS 32-bit machines, including the Risc PC. Easy click and drag operation. Machines are linked by serial cable.

With serial cable: ***£29.95***

Draggie

The Professional Application Launcher

For fast on-screen access to your most frequently used applications, games, files or directories ***Draggie*** pull-down menus are the complete answer. ***£7.50***

The Really Good Software Company
39 Carisbrooke Road, Harpenden, Herts. UK. AL5 5QS.
Tel/Fax: 01582 761 395 **E-Mail:** sales.rgsc@argonet.co.uk

No VAT or post/packing charges. Cheques, with order please, made payable to The Really good Software Company. Official orders welcome.

The winning cards

Nobilangelo Ceramalus sees how Acorn machines helped one business produce the winning hand

The name — The House of Cards — is a kind of multitasking pun/anti-pun, because the company that bears it, far from being in constant danger of collapse, has grown in strength since its birth in 1993, until they are now reliably estimated to be the largest producer of designer business-cards in New Zealand.

Surprisingly (to those who think that only Wintel and Apple are worthy of consideration), THOC's success-story began on Acorn machines and they are still at the heart of their multiplatform network. Last year the company produced 5 million cards, no mean feat in a country of 3.6 million people.

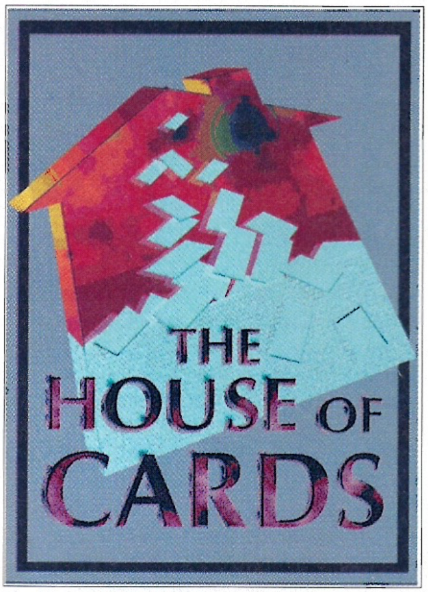
They also do other things, such as letterheads, promotion cards, greeting cards, brochures, compliments slips, logos, corporate-image design, image-processing, photo-retouching, and filmsetting, but their core business, which generates 90 per cent of their turnover, is designing and producing 90x55mm business cards in runs of 1000.

That may sound a boring product, with little scope for imaginative flair or strong turnover, but THOC's growth has, in their short history, forced them to move to bigger premises four times.

THOC, aptly, are now in William Pickering Drive, a young, vigorous street in a mushrooming industrial estate in one of the fastest-growing parts of Auckland, the beach-lined North Shore. The street is named after one of New Zealand's foremost scientists, who for a long time headed NASA's Jet Propulsion Laboratory, the division that sent out all those spacecraft to explore the Solar System and beyond.

THOC can hardly be said to be in that class, but, to use a well-known phrase, it has, in Kiwi business cards, boldly gone where no one had gone before, and has reaped the reward of their pioneering efforts.

Though based in Auckland (New Zealand's biggest city), The House of Cards have in the last 18 months spread their wings by establishing a network of commissioned sales representatives all over the country.

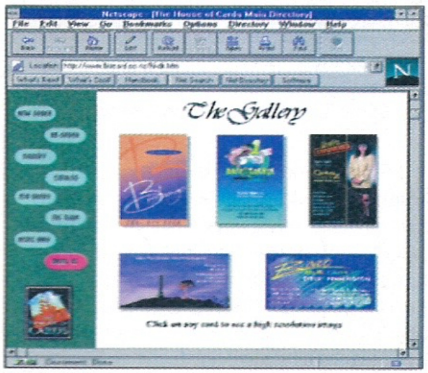


The House of Cards' logo

THOC are owned by Brian and Ann Falkner, with Brian as managing director, production manager, and one of their principal designers. They founded the company in July 1993, at about the time their first-born, Laura, appeared in the world, so Brian had two babies to attend to at once: which often meant his long hours of work were accompanied by short ones of sleep.

Brian is a genial, likeable man with a quick and subtle sense of humour, always able to see the funny side of things, a man whose design and business skills, insight and tenacity have combined to create a strong company where others saw little or no opportunity. He is in a way the embodiment of his main product, for one of the functions of a business card is to build bridges between people, and much of THOC's success can be attributed to his people-skills.

People obviously like doing business with him and working for him. His own summary of himself, tongue-in-cheek, is 'articulate, intelligent...gosh, everything.' Apart from the 'everything', which no mere mortal can lay claim to, it is not a bad sketch. He had worked with Acorn New Zealand for the three years before he founded his company, so, unlike most people, he knew about Acorn machines and what they could do. He chose to found his company on them, and proudly, because he first called it Acorn Design & Print (with Acorn NZ's blessing).



One of THOC's Web pages

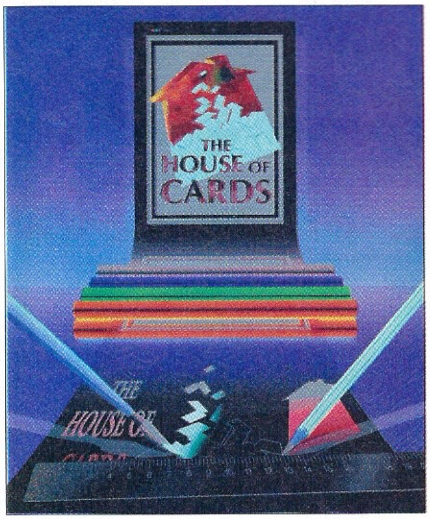
For Brian it was the only choice, 'the software was far cleverer, and far easier to use, and the machines were much quicker, than anything else available at the time,' he says. He began with an A440, running *ArtWorks* and *Impression Publisher*. As the business grew, and other staff were employed, he added two 8Mb A5000s, then ➤

a Risc PC, then a further two Risc PCs. About three years ago he decided he was generating enough filmsetting to justify a machine of his own, which meant he had to add a Mac Quadra as the file-transfer link between the Acorns and the filmsetter.

That was his first step into the multi-platform world. It worked well. It also added another string to his bow, because he could offer a filmsetting service. He now has a multi-platform network. There are three Acorns: a Risc PC 600, a StrongARM Risc PC for design work and an A3000 for accounts. The Risc PC, as Brian wittily puts it, has an 'external PC card' – i.e., a 233MHz Pentium II PC linked to the Risc PC over the network. Two Wintel PCs are used for design work, the 233MHz Pentium II and a 200MHz Pentium MMX; two more are used in administration, one for production management and one for accounts.

Skyworks Aerial Photography
Fisher-Price
KETTLE
OAK NEWS
W·H·B
For Sale
YOUNG GENERATION
DeVine

A range of samples of THOC's work



The illustration from the front cover of THOC's booklet of services, produced with ArtWorks, Photodesk 2, and Impression Publisher

To ease production management, Brian commissioned a $10,000 customised package, which, with cheerful optimism, he called 'Full House.' His network also contains two Macs, the original Quadra and a PowerMac. In spite of the addition of other platforms, 90 per cent of THOC's cards are still produced on Acorns, using *ArtWorks*, *Impression Publisher*, and *Photodesk*.

Brian's obvious emotional attachment to Acorn shows through as he gleefully demonstrates a 233MHz Pentium choking on a parallel copy that a StrongARM flies through — although his fairness and integrity is quick to add that he prefers to praise the good than condemn the rest.

He underlined that point soon after *Acorn User* arrived, saying, 'This is not a story about how The House of Cards is a bunch of rabid Acorn people. It is about how it has integrated Acorns into a multi-platform environment — and how Acorns hold their own in that environment. We've grown out of being all Acorn. Acorn is now part of the mix — an important part,' he says.

His reason for having other platforms is simply put: 'We get compatibility because there is a rest-of-the-world out there. The interpretation functions in Acorn are good, but when you are running a business producing five million cards a year they are not good enough.'

THOC's hardware and software environment also includes a range of peripherals that must be at least rare, if not unique, in an Acorn or Acorn-centred network: a $67,000 Varitype 6000 imagesetter; an $80,000 Agfa Selectscan, a high-resolution A4 scanner capable of up to 3000dpi, used for scanning photos, transparencies, and printed copy (for which it has sophisticated de-screening software); a Duoproof Agfa A3 dye-sublimation printer for proofing, which greatly reduces the number of expensive trips to outside bureaux for Cromalin proofs; a Cumana Proteus drive; and two CD-writers. Most of THOC's archiving is now done on CD-ROM. Two are produced each month, mirrors of each other. One stays on the premises, the other is stored elsewhere.

CORPORATE
GENERIC

THOC's generic samples catalogue

His head office staff of six includes three designers. He also uses contract designers for peaks and special tasks. The sight of customers sitting next to one of his designers, fine-tuning a design is obviously a common one.

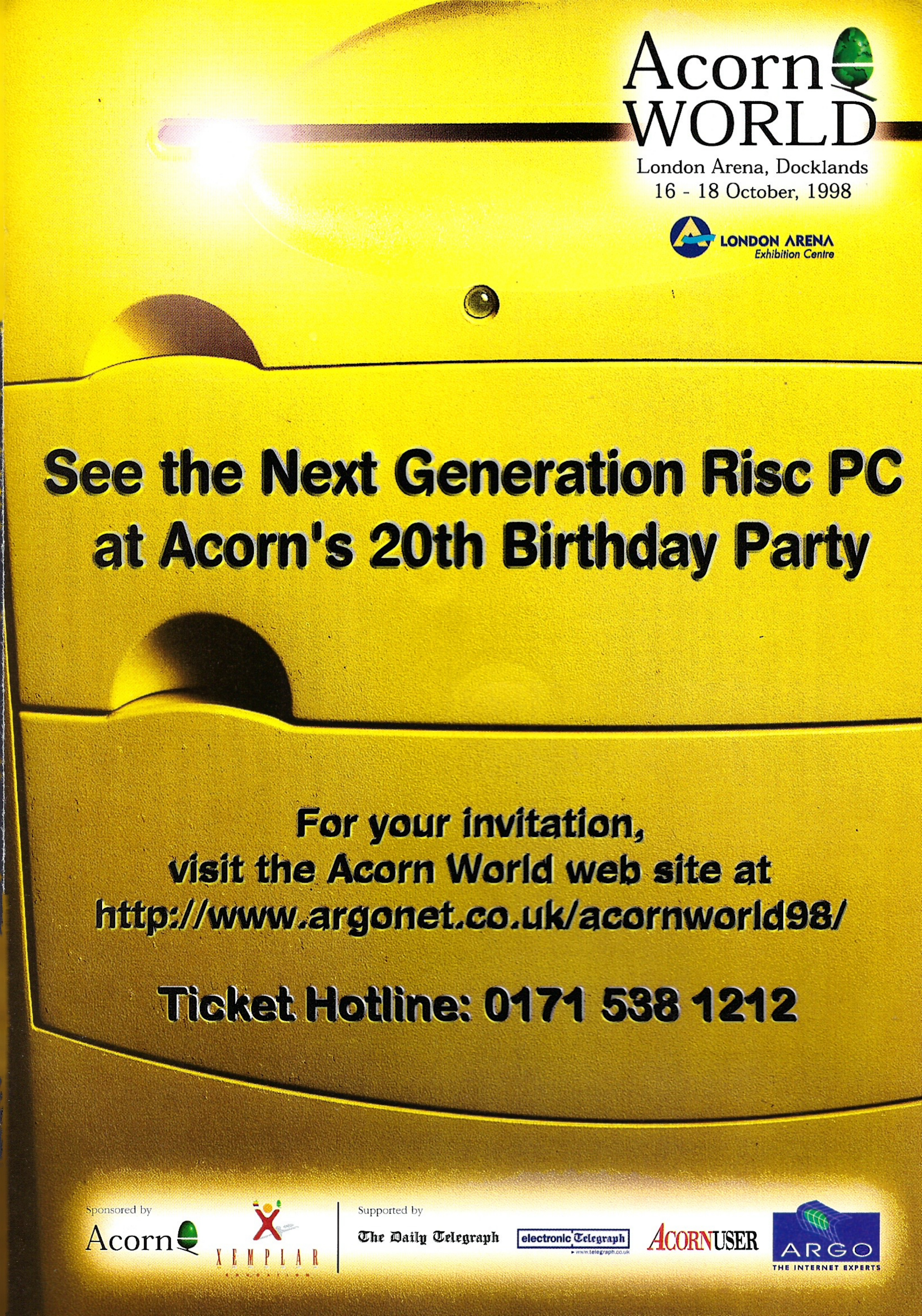
With his sales network, he has a total of 33 staff. His head office has an a air of quiet efficiency laced with frantic effort. Long days are the norm – *Acorn User* arrived at the offices in the afternoon, and no one looked like going home when we left at half past five.

THOC's business cards come in four options: printed one side only in full colour, or with printing on the reverse also, either in black, spot colour, or full colour. Normal runs are done in lots of 21 cards on each A3 sheet, which are then guillotined into the individual cards. The standard size for business cards is 90x55mm, but all sizes are available (preferably ones that fit neatly on the A3 sheets with the rest of a standard run without wasting space.)

The company also offers a service designing logos, offering an affordable service to small businesses, or a 'corporate image service' for those with the big bucks who want a comprehensive approach. The full range of wares are advertised in a striking, 24-page, full-colour brochure/catalogue done in a mixture of *Impression Publisher*, *Photodesk*, and *ArtWorks*.

Those wares do not always cost. The House of Cards believes that businesses should have a social conscience, so it does business cards free for charitable organisations through its Community Care project.

The House Of Cards can be reached via e-mail: brian@thoc.co.nz or (New Zealand only) 0800 BIZCARD. Check out their website at: http://www.bizcard.co.nz



Acorn WORLD

London Arena, Docklands
16 - 18 October, 1998

LONDON ARENA
Exhibition Centre

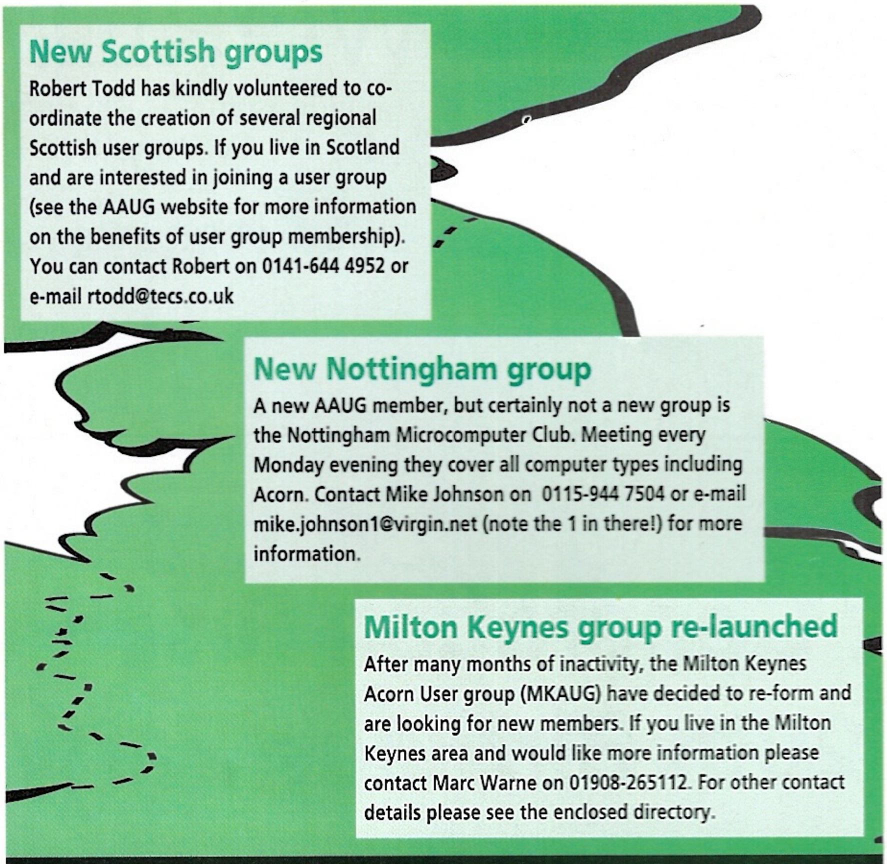
See the Next Generation Risc PC at Acorn's 20th Birthday Party

**For your invitation,
visit the Acorn World web site at
http://www.argonet.co.uk/acornworld98/**

Ticket Hotline: 0171 538 1212

Sponsored by
Acorn
XEMPLAR
EDUCATION

Supported by
The Daily Telegraph
electronic Telegraph
www.telegraph.co.uk
ACORN USER
ARGO
THE INTERNET EXPERTS



New Scottish groups

Robert Todd has kindly volunteered to co-ordinate the creation of several regional Scottish user groups. If you live in Scotland and are interested in joining a user group (see the AAUG website for more information on the benefits of user group membership). You can contact Robert on 0141-644 4952 or e-mail rtodd@tecs.co.uk

New Nottingham group

A new AAUG member, but certainly not a new group is the Nottingham Microcomputer Club. Meeting every Monday evening they cover all computer types including Acorn. Contact Mike Johnson on 0115-944 7504 or e-mail mike.johnson1@virgin.net (note the 1 in there!) for more information.

Milton Keynes group re-launched

After many months of inactivity, the Milton Keynes Acorn User group (MKAUG) have decided to re-form and are looking for new members. If you live in the Milton Keynes area and would like more information please contact Marc Warne on 01908-265112. For other contact details please see the enclosed directory.

Club directory

All the above groups, along with the rest of the Acorn User Groups worldwide can be found in the AAUG Club Directory, which is available on the AAUG website, or as a separate insert in this magazine.

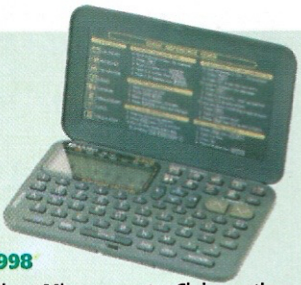
Phoebe preview tour

The Risc PC 2 (Phoebe) user group preview tour concluded with the official launch at the Wakefield Spring Show.

It was estimated that over 400 user group members in the UK and Germany got a 'sneak peak' at Acorn's latest flagship PC. Some of the earlier previews meant that members got detailed specifications and an 'up-close' look nearly 12 months before the release date, and there was always plenty of opportunity to quiz both Acorn technical and marketing staff.

Thanks go to Russell Scoates and Dave Walker from Acorn for all their efforts and many hours of driving.

Events and meetings diary



Here is a provisional list of some of the meetings and events planned for the next few months. Note that this list is by no means complete – you should check with the individual club for more details of the time and location of their meetings if not shown here.

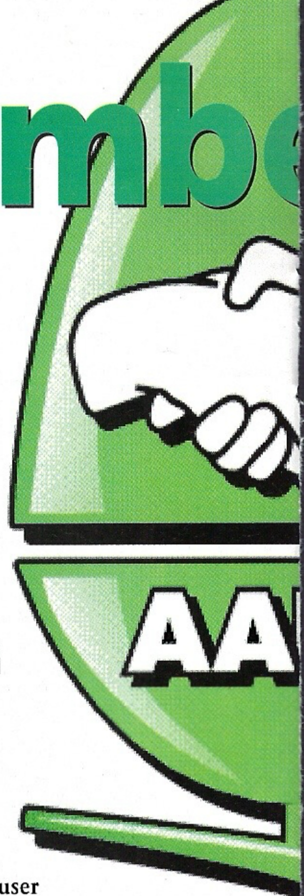
October 1998

5th – Nottingham Microcomputer Club meeting
7th – Wakefield meeting – AGM + Chris Cox
7th – SARC meeting
9th – Welwyn / Hatfield meeting
12th – Nottingham Microcomputer Club meeting
12th – SASAUG meeting
13th – Bottisham Acorn User Group meeting
19th – Nottingham Microcomputer Club meeting
21st – Northwest London Computer Club meeting
23rd – Welwyn / Hatfield meeting
26th – Nottingham Microcomputer Club meeting
27th – Blackpool Computer Club meeting
28th – Wellington Acorn Computer Club meeting

November 1998

2nd – Nottingham Microcomputer Club meeting
4th – Wakefield meeting
4th – SARC meeting – Suffolk police talk
6th – Welwyn / Hatfield meeting
9th – Nottingham Microcomputer Club meeting
9th – SASAUG meeting
10th – Bottisham Acorn User Group meeting
16th – Nottingham Microcomputer Club meeting
18th – Northwest London Computer Club meeting
20th – Welwyn / Hatfield meeting
23rd – Nottingham Microcomputer Club meeting
24th – Bottisham Acorn User Group meeting
24th – Blackpool Computer Club meeting
25th – Wellington Acorn Computer Club meeting
30th – Nottingham Microcomputer Club meeting

Memb



It's been a busy few months for the user group community with a lot of activity and several new groups forming. **Neil Spellings,** AAUG

New stronger links with Acorn

Following a recent meeting between the Acorn marketing team and the AAUG, user group members worldwide will now benefit from increased communication and information from Acorn. Some of the new initiatives are:

- Acorn to dispatch Clan newsletters to overseas Clan members early to counteract the delay in international postage
- Acorn will post workstation and Clan press releases in a special area of the AAUG website. This will allow user group members who are not Clan members access to the most up-to-date news and information from Acorn
- Acorn to include user group information on the Acorn website, and are also looking into the possibility of including the group directory in the HTML help files for Phoebe

SARC announce IRC online meetings

With the aim of establishing closer links and interaction between the many Acorn computer clubs, the Suffolk Acorn Risc Club (SARC) in association with the Welwyn & Hatfield Computer Group (WHCC) are pleased to announce that from 1st September 1998 they will operating a weekly IRC chat session on the WolfChat server www.wolfchat.org

The sessions will be on #SARC, a "registered" channel on the WolfChat server, starting at 8pm (BST) until 9pm (or later if required). To log on you will need to configure your IRC client to wolfchat.org - port 6667

Our colleagues at the Welwyn & Hatfield club also have a "registered" channel – #WHCC – on the WolfChat server, and will be going online on Friday evenings. Contact Geoff Lane for more information about dates and time schedules. The team

ers only

chairman presents a round-up of some of the highlights from the past six months, and details of the AAUG discount scheme

at #SARC is looking for "Guests" to come online for future sessions. If any of your club members are interested in giving a talk or answering questions online about an Acorn-related topic they would be pleased to hear from you. Also, they would welcome input from representatives of Acorn software houses or developers about their products or services.

For more information, or answers to queries about this project, please e-mail Roy Moore at sarc@archipel.demon.co.uk

AAUG at Acorn World

This year's Acorn World show is planned to be the biggest and best show ever – and it's also Acorn's 20th birthday party. AAUG have worked closely with Acorn and are hosting a special 'User Group Village' where visitors to the show will be able obtain information about all of the various Acorn user groups and meet several of the groups who will be promoting themselves in the Village.

Accommodation

The AAUG is coordinating a list of 'cheap and cheerful' accommodation (ie. spare beds, sofas and floors) that people who are travelling to the show from abroad, or from further afield in the UK, can use to find overnight accommodation if travelling home the same day is not possible. People may also wish to take advantage of the three day pass and as such would need somewhere to stay.

So, if anyone in the London or surrounding areas (Essex, Kent, Croydon, Surrey etc) can offer a spare room or sofa for one or more of the evenings of the show weekend to a fellow Acorn user, please e-mail or telephone me directly and I will add you to the list.

For more information see the Acorn World guide on pages 53 - 58.

Discount scheme

The AAUG have been operating a discount scheme for all user group members for quite some time but until now all the details have only been available on the Internet. For those user group members who do not have Internet access, here is the complete listing of those developers offering discounts to user group members.

To take advantage of any of the discounts listed, you need to obtain the official AAUG order form from your club committee — only orders submitted on this form will qualify for the discounts listed.

Note that quoted discounts are off catalogue prices, and some may not apply at shows such as Acorn World as many companies offer special show discounts on the day.

Company	Discount	Products
Mijas Software	17.5%	All
Apricote Studios	20%	All
Anglia Multimedia	25%	All plus other special offers
Learning Through Computing	10%	All
Fabis Computing	25% 40% 50%	Any single purchase Any 10 mixed items Any 10 identical items
NCS (Archive)	£10 off	New subscriptions plus a free CD
Yellowstone Electronic Solutions	10%	All catalogue products
Tower Electronics	Free connection	To Enterprise Internet
Quantum Software	10%	All
Clares Micro Supplies	10%	All software products
Topologika	10% 20%	Any single purchase Two purchases Buy 3 get cheapest free
H S Software	15%	All
The Event Horizon	10%	All
Werewolf Software	5%	All
Longman Logotron	10% 15% 25%	Single purchase 5 - 10 items 10 or more items
Computer Concepts	10% 20%	All hardware (ex printers) All software
Alternative Publishing	17.5%	All
Creative Curriculum Software	20%	All
Sherston	20%	All
Argonet	£89.95 £119.95 £94.95	Get connected pack Surf at speed pack Modem trade-up
Quadworks	10%	All
TBA Software	10%	All
4Mation	15%	All
The Datafile	10%	All
The ARM club	10%	All
R-Comp/RCI		Ring for special deals
Spacetech	10%	All

Companies not listed who would like to offer user group members discounts should contact Neil Spellings to obtain an information pack

Worldwide User Group Directory STOP PRESS

The AAUG insert in this magazine has been subject to change since it went to press. For details of all the changes, visit the AAUG website at http://www.argonet.co.uk/scs/AAUG/

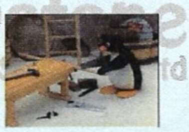
AAUG contact details

Chairman:	Neil Spellings
Tel:	0171-451 1960 (daytime) 0385 935497 (anytime)
E-mail:	aaug@argonet.co.uk
Website (for all up-to-date info):	http://www.argonet.co.uk/scs/AAUG/
Post:	Flat 5, 19 Normanton Road, South Croydon CR2 7JU

Yellowstone
Electronic Solutions Ltd

All prices include VAT but exclude carriage.

DeskTV



Modular multimedia card for the Risc PC incorporating a TV receiver & audio processor. Capture replay files from live TV or take screen shots (saved as sprites). Desktop control of volume, bass and treble. Video input allows connection of video or video cameras. Call for more details.

Standard Card (with tuner) £209
Entry Card (no tuner) £189
Discounts when bought with a plug in option

New prices !

Visit our Website
http://www.yellowstone.co.uk

Memory

Please call for latest prices

16MB £ 19 32MB £33

CD- ROM Drives

36 Speed £ 69

Special Price

Mozart
DIGITAL AUDIO

16-bit Digital Soundcard and four channel mixer for the Risc PC
£ 59

Risc PC Audio Mixer

4 channel mixer for the Risc PC.
£ 29

PC Card Upgrade

for SX/33, DX2/66 & DX4/100 cards. Chip is upgraded to the AMD 586/133 and active cooling is also added. Card upgrade takes 21 days. £ 165

DeskFM

Stereo 87.5 - 108 MHz
With Digital Sound Processor
FM Tuner card for Acorn machines
£69.95

DeskSP

Digital Sound Processor
Sound processor for Acorn machines
£ 44.95

DeskTV Teletext

£ 69
including Octopus Teletext+ Software

The Octopus Teletext Software and Yellowstone hardware combine to make a superb Teletext plug on option. Saves text pages to files.

Enhanced Performance ATA-2 Interface
RapIDE32

Fast 32-bit IDE Interface for the Risc PC. Attach up to 4 additional IDE devices.
Features now include:
Partitioning software
Syquest/Removables support
Desktop control

" without one you are not doing your machine or hard discs justice"
Risc User, April 1997

New price £ 119.95

Hard Disc Drives

		with RapIDE32
Quantum Fireball 2.5GB	£ 99	£ 209
Quantum Fireball 3.2GB	£ 106	£ 216
Quantum Fireball 4.3GB	£ 125	£ 235
IBM Deskstar 6.4GB	£ 153	£ 263
IBM Deskstar 8.4GB	£ 205	£ 315
NEW ** Maxtor 11.5GB ** NEW	£ 275	£ 385
Quantum Bigfoot 4.0GB	£ 112	£ 222
Quantum Bigfoot 6.0GB	£ 147	£ 257
Quantum Bigfoot 8.0GB	£ 173	£ 283
NEW Quantum Bigfoot 12.0GB NEW	£ 249	£ 359

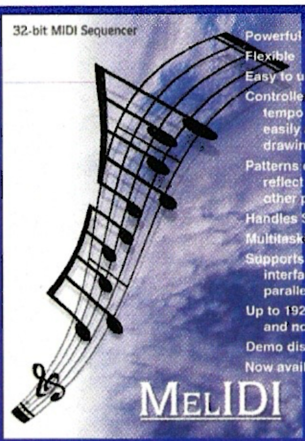
Call our Orderline FREE 0500 549111
This number is for orders only. No other matters can be dealt with on this number.

Bramingham Park Business Centre, Enterprise Way, Luton, Bedfordshire LU3 4BU.
Tel: 01582 584828 Fax 01582 654440 E-mail sales@yellowstone.co.uk

---

Liquid Silicon

• Computers & Music Hardware • Upgrades • Software • Cables etc •



32-bit MIDI Sequencer

- Powerful
- Flexible
- Easy to use drag & drop
- Controller maps (e.g. tempo and velocity) easily alterable by drawing with the mouse
- Patterns can be linked to reflect changes made to other patterns
- Handles System Exclusives
- Multitasking playback
- Supports any MIDI interface, including parallel and serial
- Up to 192 MIDI channels and no track limit
- Demo disc available
- Now available – £129.00

MELIDI

Recent/New Releases

Abuse – £25.00
Ankh CD – £25.00
Descent – £Call
Exodus – £22.00
Heroes of Might and Magic 2 – £Call
Photodesk 3 – £Call
Quake Risc PC CDs – £35.00
Syndicate Plus CD – £29.00

TDK

Discs (example 10x white discs – £4.60, 50x black discs – £18.50, 5x HD red/blue/green/white discs – £2.49)
Batteries (example 2x AA alkaline – 93p, 1x 9V alkaline – £1.84)
Audio & Video Tapes – £Various

FREEPOST EH2725
Kirkcaldy, Fife, KY2 5BR
United Kingdom
Tel: 01592 592265 Fax: 01592 596102
email: Liquid@cableinet.co.uk
http://www.cybervillage.co.uk/acorn/liquid/

No 'free' offers

No fancy gimmicks

Just £1691.00

We supply a range of CCD and laser bar code scanners and include with these our !BarReader driver software which allows bar codes to control most desktop software.

Further information is available.
Complete systems from £193.88

Our bar coding software produces Draw files of the following formats: EAN 8, EAN 13, UPC A, ISBN, ISSN, Code 39 (Normal and Full ASCII), Telepen and Binary.

Further information is available.
!BarCoder – £69.33

Computer Systems

Monitors are not included in these prices
Phoebe 2100 – £1691.00
Phoebe advance order deposit – £100.00
Risc PC SA 4+0Mb 1.7Gb HD – £911.00
Risc PC SA 4+0Mb 1.2Gb HD, 8x CD – £918.20
Risc PC SA 8+2Mb 1.7Gb HD, 8x CD – £1199.00
J233 Risc PC 32+2Mb 2.1Gb, 24x CD – £1288.60
A7000+ 8Mb, 2.1Gb HD – £767.00
Microdigital Medi 8Mb, 24x CD – £999.00

Special Offers and Trade-ins

The following offers are valid until 30/9/98. Clan membership is required (£15 to join). Buy any Risc PC and you can buy a PC card and/or an internal modem card as follows:
DX4-100 – £58.75
5x86-100 – £88.13
28800 modem expansion card – £58.75
The Risc PCs over £1000 can also be traded in against with an older computer. Anything from a Spectrum or BBC Micro to a PC, Mac or other Acorn machine will qualify for a further £235.00 off of the above prices. Please ask for further details.

Monitors

(Either bought with computer or separately):
Acorn AKF60 (14") – £253.80
Acorn AKF92 (17") – £614.76
iiyama 350 (15") – £185.00
iiyama 17 (17") – £361.30
iiyama 17ES (17") – £420.00
iiyama 400 (17") – £361.30
iiyama Pro 400 (17") – £380.10
iiyama 450 (19") – £596.30
iiyama 501 (21") – £866.50
iiyama Pro 501 (21") – £866.50
iiyama 502 (21") – £908.85
iiyama Pro 502 (21") – £937.00
iiyama Pro-Lite 36 14.1" LCD – £890.00
PC cards:
5x86-133, 512K cache & PC Pro – £360.00
PC Pro – £38.95
PC Sound Pro – £29.50

Psion Series 5

4Mb, with PC connection kit – £409.00
8Mb, with PC connection kit – £449.00
Parallel link – £34.95
PsiRisc link – £Call

Memory Upgrades

Please call to check current prices.
Other upgrades are available.
A3000 1-4 Mb – £64.60
A3010 1-4 Mb – £69.30
A3020/A4000 2-4 Mb – £52.80
A5000 2-4 Mb – £69.30
A300, 400, 5000 4-8 Mb – £128.00
Risc PC/A7000 SIMMs:
16Mb – £14.50
32Mb (not original RPCs) – £34.50
64Mb – £127.50
1Mb VRAM – £49.00
1-2Mb VRAM swap – £55.00
2Mb VRAM – £92.80

Music & Sound Section

Please call for other musical items
MIDI interfaces:
A30x0/A4000 internal 1x1x1 – £57.50
DMI 50 dual MIDI card (2x2) – £137.95
XG upgrade for DMI 50 – £128.95
16-bit sampler for DMI 50 – £69.95
MIDI Max II internal 1x1x1 – £92.50
Parallel Port 1x1x1 – £89.00
Synth 8 or Basic Synth – £44.60
Synth Plus – £55.75

Other hardware:
Yamaha YST-M7 speakers – £43.00
YST-M20 DSP speakers – £65.00
YST-M100 speakers – £Call
YST-MS25 speakers & subw.– £79.00
YST-M100 – £Call
YST-MSW5 subwoofer – £59.00
YST-MSW10 subwoofer – £89.00
Sound Byte Recorder – £57.50

Other software:
MIDI Support – £18.50
Prosound – £116.95
Junior Sibelius – £49.00
Sibelius 6 – £99.95
Sibelius 7 Student – £319.95
Sibelius 7/VMP – £629.00
(Includes a free upgrade to VMP)
Optical Manuscript – £259.00
Sound module serial driver – £37.95
Studiosound – £116.95

Other Hardware

Hard drives & kits – £Call
Risc PC second slice – £116.30
RPC second slice (no PSU) – £90.00
StrongARM upgrade – £275.00

Other Software

ANT Internet Suite 2 – £112.00
Brutal Horse Power – £26.00
DataPower 2 – £165.00
Doom CDs – £32.50
Empire Soccer 94 – £22.00
Inferno – £9.50
iXRC – £14.99
Ovation Pro – £174.50
Personal Accounts 3 – £43.00
Photodesk Light – £125.00
Photodesk 2 – £247.95
Prophet 3 – £160.00
Wizard Apprentice – £22.50
The Tekkie CD – £45.00

Books & Manuals

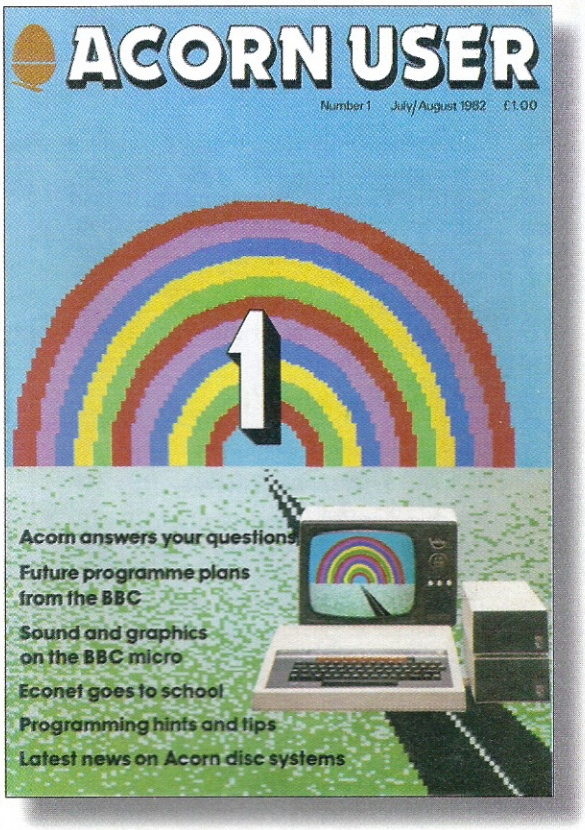
BBC BASIC Manual – £21.95
RISC OS 3 PRM – £104.00
RISC OS 3 PRM V5a – £32.75

Catalogue

Our free catalogue contains over 2000 items. Please ask for a copy.

*We will attempt to match or beat **any** advertised price – even special offers.*

All prices INCLUDE VAT & UK carriage
Official orders and callers welcome. Finance available.



ACORN USER

Number 1 July/August 1982 £1.00

1

Acorn answers your questions

Future programme plans from the BBC

Sound and graphics on the BBC micro

Econet goes to school

Programming hints and tips

Latest news on Acorn disc systems

A brief history of *Acorn User*

Steve Turnbull looks at the magazine that has changed with Acorn's times

The *Acorn User* magazine was first published in July 1982 just over 16 years ago and in the computer world that is a very long time — enough for the power of machines to double ten times over, according to Moore's law. In fact the power of Acorn's machines has only doubled nine times but we're quibbling.

Magazine numbering is like year numbering — there is no issue zero so strictly speaking the 200th issue of *Acorn User* is actually number 201 (just as the millennium really starts in 2001) so we're really celebrating a concept. Acorn, one the other hand, really are 20 years old.

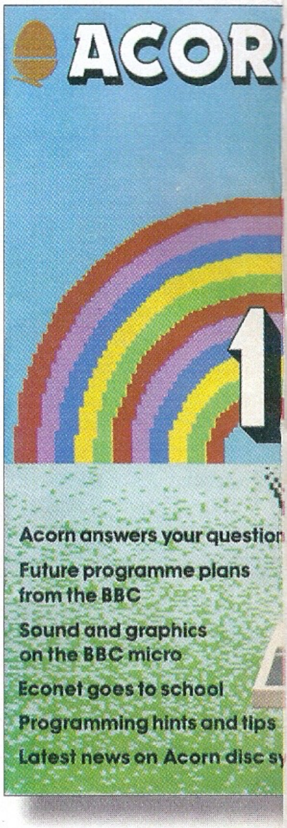
Here's a look at some of the key editions that were released during the lifetime of a company that seems always to be teetering on the edge - whether of failure or success.

ISSUE 1 – July/Aug '82

The first issue cost £1, had 44 pages and was published by Addison-Wesley. It was launched just prior to the release of the Electron — the cut-down version of the 8-bit BBC Micro.

The Acorn news section covered such gems as: the Mobile Classroom which had seven even older Acorn Atoms networked with Econet; the shipping dates for the vastly over-subscribed BBC Micros; and the MIT/Acorn deal to implement the full ➤

ACORN USER
1
BBC MICRO·ELECTRON·ATOM
ACORN USER
EXCLUSIVE
NEW BBC MICRO
BBC MICRO·MASTER·ELECTRON·ATOM
ACORN USER
MAZE GAME
BBC MICRO·MASTER·ELECTRON·ARCHIMEDES
ACORN USER
NEW BBC MICRO RISC
1987
BBC·MASTER·ELECTRON·ARCHIMEDES
ACORN USER
CAD
BBC ACORN USER
100
WHAT'S NEXT
WIN


ACOR
Acorn answers your questio
Future programme plans from the BBC
Sound and graphics on the BBC micro
Econet goes to school
Programming hints and tips
Latest news on Acorn disc s

LOGO language for the BBC Micro. Articles included were on the BBC Basic graphics and sound commands; a feature on the BBC TV Computer Literacy project which gave the BBC Micro its initial boost; plus an educational article on Econet.

ISSUE 43 – February '86

By February 1986 with a price of £1.20 and 204 pages we had reached the launch of the BBC Master while the news featured Acorn's withdrawal from the US market.

Games being featured were *Alien-8, The Secret Diary of Adrian Mole, Phantom Combat, Citadel, Atic-Atac* and *Gauntlet*. Music was the latest big thing with Island Logic's *The Music System* and the *UMI2B* sequencer from *UMusic*.

Articles covered using Shadow RAM, adding commands to BBC Basic and *Elite* Cheats.

ISSUE 50 – September '86

A milestone for *Acorn User* in September 1986, the price had risen to £1.25 and the pages were at 180. The news was that the BBC Master had been chosen to drive the Domesday Project video disc using the VFS (Videodisc Filing System). In a retrospective and forward-looking news item the then-editor Tony Quinn mentions the RISC chip on the horizon — and, in an awkward attempt to encourage women to the computer, suggests they write to Acorn to tell them how to use this new chip. (The ultra-cheap Master Compact was launched the following month.)

ISSUE 61 – August '87

The new ARM-based supercomputer, the Archimedes, is launched the first commercial RISC-based computer retailing at under £1000 leaping Acorn from the back with only 8-bit machines to the front with 32-bits, bypassing the 16-bit field completely. The magazine stood at 164 pages and now cost £1.30. Where the A310 left space for other news it was the next *Acorn User* exhibition at the Barbican.

ISSUE 76 – November '88

For November 1988 the price was £1.30 with 172 pages. The big news this month was the launch of RISC OS 2 to replace the original Arthur operating system, though a comment from an educational adviser was "Will children really benefit from an ability to open more than one application at a time?" Along with the operating system were three applications: *ArcDraw, ArcPaint* and *ArcEdit*.

Other articles featured the Sinclair Z88 and, the mega-game of the year, Superior Software's *Exile*.

ISSUE 83 – June '89

Release of the A3000.

ISSUE 100 – November '90

The big story was the advent of CD-ROM drives and the incredible amount of data you could store on them explaining that the Mac and PC markets had already sold 200,000 units. The magazine had 156 pages and cost £1.60. Other news included using the A3000 as a low cost workstation and a report on the BBC Acorn User show where Acorn had launched the A540.

ISSUE 112 – November '91

The A5000 sees the light of day with RISC OS 3 and the ARM3 previously only seen in the A540. There's a cover disc on the mag featuring *Lemmings*, and *Chocks Away Special Mission* and a 32-page games supplement in the November 1991 issue. What is more *Yellow Pages* still runs to ten pages of type-in listings.

ISSUE 121 – August '92

The cover story in August 1992 is the portable A4. Meanwhile other articles cover *PDSView* from Spacetech supported by a huge library of extra-terrestrial images from NASA, and 4Mation's *Vector*. News stories tell of a set of upgrade ROMs for RISC OS 2 machines, and the incorporation of ARM technology into Apple's Newton.

ISSUE 123 – October '92

The BBC Acorn User Show is going strong at the Wembley Conference Centre in October 1992. 204 pages feature articles on viruses, getting that old Beeb fixed, the ARM 250 and a new range of Acorns.

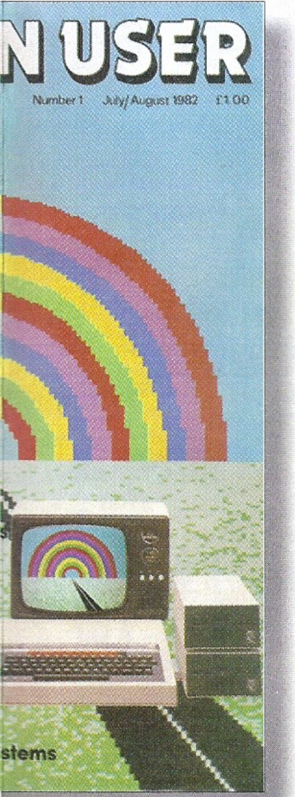
The A3010 and A3020 were more rounded than the A3000 and made from moulded plastic, the A3010 in particular with its distinctive green function keys and Acorn's first foray in the mass market with joystick ports, a TV modulator, 2Mb of RAM and no hard disc. The sister A3020 wearing red and cream for schools was seen as the replacement for the A3000. Home officer-users were provided with the A4000 in the more usual three-box design while the partnership with Psion led to the Series 3 being badged as the PocketBook.

A brief h
Acorn

ISSUE 142 – May '94

The magazine leaves the Redwood stable for Europress. By May 1994 there's a cover

ACORN USER
A3000 • ARCHIMEDES • BBC • MASTER
FUN AND GAMES
FREE 32 PAGE GAMES SUPPLEMENT INSIDE
PORTABLE PRINTERS • EDUCATIONAL GAMES • USING
ACORN USER
AUGUST 1992
£1.80
AT LAST ACORN'S A4 PORTAB
See full review on page 20
ACORN USER
A3000 • A5000 • ARCHIMEDES • BBC • MASTER
OCTOBER 1992
£1.80
INSIDE: A complete guide to the BBC Acorn User Show
NEW AC
FAMILY MACHI
Plus new ranges for business and edu
ACORN USER
The best-selling Acorn magazine in the world
THE RISC PC
Acorn's new machines revealed at last
Technical details
Risc PC vs Mac/PC
Risc PC in education
The second-hand market
ACORN USER
The best-selling Acorn magazine in the world
ONLY £2.95
Impression vs PageMaker vs Quark
Does Acorn win the DTP battle?
ACORN
New Aco machine
Three new systems unvei



istory of
User

disc every issue, the *Yellow Pages* have gone, and the price has risen to £2.95. Acorn have the Risc PC to launch and there's an *Acorn User* show in Harrogate and the Tesco *Computers for Schools* scheme is in its second year.

CD-ROM drives are being added to machines, games – *Diggers, Speedball 2* and *Sensible Soccer* – are being converted from 16-bit Atari/Amiga platform to the Acorn, and Acorn themselves launch into the German market. Other stories feature Apple joining the RISC family with the launch of the Power PC.

ISSUE 150 – Xmas '94

Europress gives way to IDG Media as publishers. MPEG and Digital Video are the hot issues for Christmas 1994 as is *ArcWeb,* the first software – and in the public domain to boot – to bring the World Wide Web to Acorn screens. Meanwhile ARM have produced the ARM7500 with an ARM7 core. South Africa and Denmark are the latest converts to RISC OS technology and Cumana have put together a complete multimedia system for homes and schools. The A3010 package with games, word processor and education packages is now only £299.

Bad news too as we report on the PC co-processor being a no-show at the recent Acorn World show due to a missing Korean chip and Acorn reveal a £2.2 million deficit putting it in the red for the first time since 1992.

ISSUE 157 – July '95

Breaking news on the StrongARM.

ISSUE 159 – September '95

One-time rival *Acorn Computing* merges with *Acorn User* taking onboard contributors such as Mike Cook. There's news of the Taos operating system and Sibelius goes from strength to strength as composers prepare for the Proms using *Sibelius 7.*

The main news though is the release of three new machines – A7000 codenamed Kryten and the faster Risc PC 600 and 700, although the FPA is delayed. We're using RISC OS 3.6 now and the A7000 is made compact by the custom chip designed by ARM and made by VLSI the ARM7500.

The information superhighway is involving everyone with Online Media trials in Cambridge while Acorn Computer Group's web server went live on Monday 19 June 1995.

ISSUE 170 – July '96

Big changes as Acorn and Xemplar split and move homes. The Wakefield Show proves to be one of the most popular shows in recent years and there's a second CD-ROM on Acorn User in July 1996.

The Internet takes over from the superhighway concepts trialled by Online Media and we see the Net Computer. Acorn's share price soars in the wake of the Oracle Network Computer.

ISSUE 174 – November '96

The StrongARM upgrade arrives in time for Acorn World '96 at Olympia and ARM unveil the 810 processor for the first time. Articles feature offline video editing from Eidos and Irlam as well as news on global positioning systems. For sound fans there is hands-on advice on tidying up your sound system and a brief guide to MIDI.

ISSUE 183 – July '97

The new A7000+ is the cover story in July 1997 but the Wakefield Show in May had revealed a tantalising glimpse of the long-awaited Acorn portable. DVD starts raising its head too. As well as reviews of the A7000+ the BBC Micro returns – via an emulator. Other interesting snippets feature a new wave of games designers, a Risc PC used in making oil pumps of Triumph motorbikes and good financial news from Acorn.

ISSUE 185 – September '97

The NetStation was the cover feature in September 1997 and keeping the Internet centre stage was an article on website design tools. Other reviews looked at embroidery software, table designers, better graphics and photography as well as the finale of the series on creating your own arcade games.

ISSUE 196 – July '98

We know it's coming, we all saw it was yellow and we wanted more, the Clan members got to see of the new faster and hipper Risc PC 2, *Phoebe,* at the Wakefield Show this Spring. The new portable *Peanut* was equally popular and there's even news of the first ever Acorn clone – the *Medi* from MicroDigital.

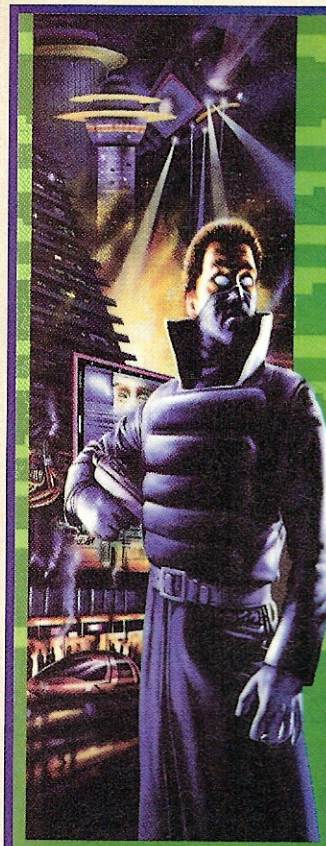
ISSUE 200

This is it ...

The Editors

Graham Bell	Tony Quinn
Jane Fransella	Barry Monk
Karen Donaghay	Mark Moxon
David Matthewman	Steve Turnbull

The best-selling Acorn magazine in the world
ACORN USER
Essential for all users of 32-bit RISC OS computers
StrongARM
All you ever wanted to know about the fastest upgrade ever
Cover Disc
Inferno
Collector's CD-ROM No.2
POWER MUSIC
Tank Attack
On review
NetStation
TOWER POWER
World exclusive
First look at Acorn's amazing Pheobe
TRAXsequencer



RiscPC and A5000 with 8Mb Ram or more

SYNDICATE™

From Bullfrog Productions Ltd

£29.00
INC VAT

Interactive R Comp

ABUSE™
CRACK DOT COM

Risc PC version

£25.00 inc. VAT

R Comp

"HTMLEdit [v3] is the outright winner"
Acorn User, Sept 97

"The only HTML editor worth considering"
Acorn Publisher, August 97

"[HTMLEdit] is going to be hard to beat"
Risc User, July 97

"Using the program is simplicity itself"
Archimedes World, June 97

"The editor and browser are superb..."
Archive, September 97

LockSmith	£15
& PCSound Pro 2 now out too!	£40

All-new Versions!

HTMLEdit Studio

Next Generation WWW Authoring For RiscOS

All the tools you need for **£105!**

The press agree with us when we say that our RiscOS Web Authoring solutions set new standards in power and ease of use. Now, in our quest to produce an even more integrated and powerful solution, we've put together a single pack containing:

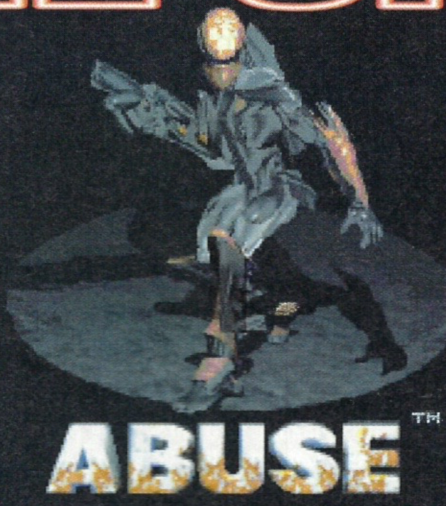
HTMLEdit 4+:	Java support, sound and music, link and image checking, syndax colouring and OLE....	£53
Enhanced Web Toolkit:	Visual frames, tables, animations, maps, palette control, drawfile conversion...	£30
WebSpell:	A complete HTML-aware spelling checker	£15
Webster XL:	The latest version of our hot new browser with frames, tables, forms, sound and JavaScript.	£25

Also, check out our new *SiteMaster* for absolute control over your whole site! £25

Check out http://www.rcomp.co.uk/

R-Comp, 22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS
Tel: 01925 755043 Fax: 01925 757377 Email: rcomp@rcomp.co.uk rci@rcomp.co.uk

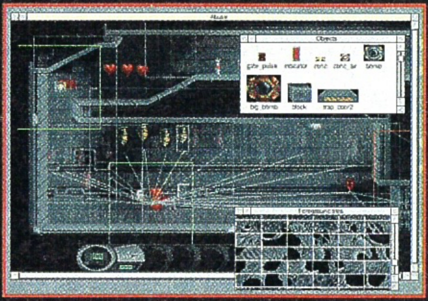
GAME SHOW



Genetic mutations, mayhem and massacre as **Steve Mumford** reviews *Abuse*

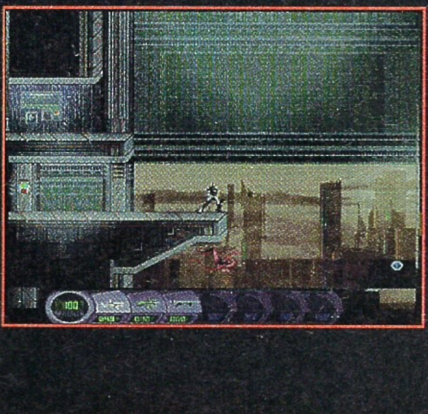
As soon as the introductory plot starts scrolling up the screen, you can tell that this just isn't going to be Nick Vrenna's day. A victim of a miscarriage of justice (still as popular in 2009 as they are today), Nick has been thrown into a maximum-security jail which just happens to have its very own mad scientist, a Dr. Alan Blake, intent on isolating the sequence of genes that characterises violence and aggression in humans.

Any fans of genetic engineering should look away now, as Dr. Blake has a slight accident with his discovery and manages to infect everybody in the place. By some strange twist of fate, Nick is immune to this chemical cocktail, and is now forced into a race against time to stop the prison's tainted water supply from infecting the whole world. He does this in time-honoured fashion, by grabbing the nearest suit of armour and a trusty laser rifle, and zapping chunks out of anything that moves.

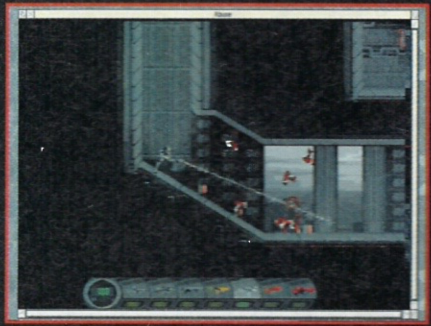


Abuse is a two-dimensional platform-based shoot-em-up, originally written by Crack Dot Com and published by Electronic Arts. R-Comp Interactive have provided us with the conversion, enlisting among others the talent of Lee Noar, who provided us with a version of the shareware version of the game not so long ago. The control mechanism is similar to games seen on the Amiga and some of the 16-bit consoles; as well as being able to control the up/down, left/right motion of the hero, you have full and independent command of the angle at which Nick is firing.

This technique is very useful when you find yourself being chased by packs of mutants; being able to toast them with laser fire while running the opposite direction can prove to be a lifesaver. The game is supplied on two floppy discs and takes up a little under ten megabytes on your hard disc. It's nicely packaged, and comes with brief Acorn-specific instructions as well as a detailed manual covering the level editor included with the package. The action, as you might expect, is frenetic – *Alien*-inspired monsters burst through walls and drop from air ducts, and the different varieties have a range of weapons at their disposal.



Not to be outdone, there are seven firearms that you can collect during the course of the game, my favourite being the wonderfully precise laser sabre. Levels are large and become quite complex – there's a whole range of objects to interact with, including doors, switches, fragile walls, moving platforms and teleports, and all of these are tied together with a set of logic switches – the activation or destruction of one object can influence the behaviour of another.

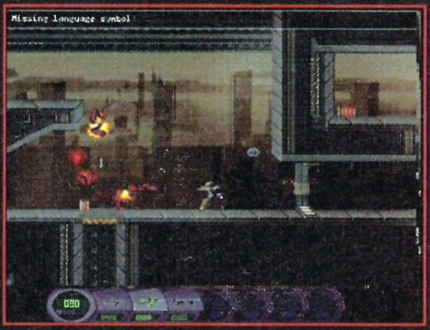


These are used in a variety of ways, including the tried-and-tested 'shoot all the aliens to open the door' technique as well as security systems you can activate to paste any monsters following your trail. *Abuse* makes use of dynamic lighting as well, and the atmosphere is dark and unsettling – don't be surprised if activating a switch plunges you into sudden darkness while releasing hordes of monsters a few feet down the corridor.

R-Comp Interactive have done a good job on the conversion of this product. As is the norm, they've added one or two extra features that might come in handy. When originally released on the PC, the screen resolution used was 320 x 200 pixels; on the Acorn, it's possible to change from a wide range of values, depending on the horsepower you've got under the bonnet and how much of the level you want to cram on the screen at once.

Abuse has been trained to be desktop-compatible as well, so you can either play the game in a window on the desktop, or switch between RISC OS and the full-screen view by clicking on the *Abuse* icon on the iconbar. As mentioned in the manual, the higher resolution modes are more suitable for use in the editor when you want to get a detailed view of the layout of the level, but the ability to pause the game, swap resolutions and start from where you left off is very useful indeed.

The level editor is a great addition and probably one of the most exciting features of the game; it gives you full control over the design of the levels as well as access to the same network of logic systems used in the main game levels. However, this technology comes at a price, and you'll need no small amount of patience to get to grips with the system.



The easy part is putting together the level graphics at the start of the design process; the act of linking chains of objects and influencing their behaviour is somewhat more obscure; the Help file included within the *Abuse* application is worth reading.

Once you've mastered the knack, it's possible to create some quite subtle game mechanics, and I can imagine that level creation could account for a large percentage of the game's longevity. Without the level editor, *Abuse* would have been a fun, although unremarkable, shoot-em-up. As the full package, it promises a great deal of gameplay and is a title I can thoroughly recommend.

Product details

Product:	Abuse
Price:	£25 incl. VAT & UK postage
Company:	R-Comp Interactive
Address:	22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS
Tel:	01925-755043
Fax:	01925-757377
E-mail:	rci@rcomp.co.uk
WWW:	http://www.rcomp.co.uk/

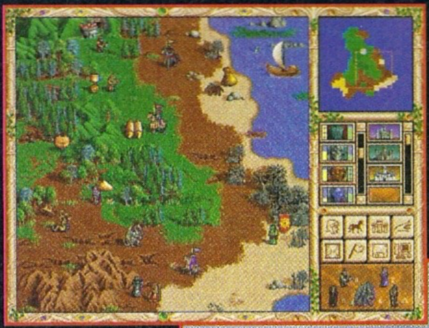
GAME SHOW

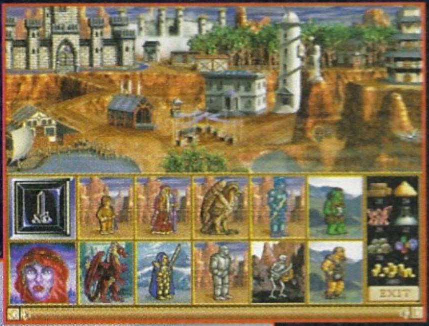
Steve Mumford brings you the latest games news

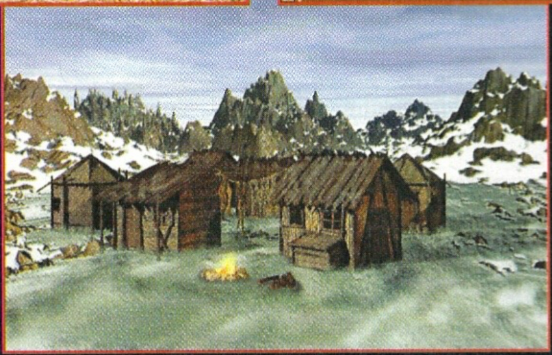
The last year has been something of a miracle from the point of view of the Acorn games scene; we've seen all manner of new projects announced and new conversions released, and although events have been marred by some heated debate/bickering in the newsgroups, I think there are few people who would argue that we're not moving in the right direction. If you want to catch up with the latest news, read on – I'm sure you'll be interested.

R-Comp Interactive

It looks like Andrew Rawnsley and his team are already working up for the Acorn World '98 show; having already released *Syndicate+* and *Abuse* this summer, RCI are preparing to surprise Acorn owners with two more releases in the month of September.







Descent is a three dimensional shoot-em-up set in the caverns and passages of a series of off-world mines – a hostile intervention by an alien race has rendered inoperable the control systems of the affected moons, and the mining robots are now under the influence of the alien power. Strapped into a small but manoeuvrable fighter, it's up to you to tip the scales in the favour of the Terrans once more, by infiltrating each facility in turn and overloading the central nuclear reactor.

The game's unique feature was that it allowed full 360-degree rotational movement – there's no definite sense of 'up' or 'down' throughout the levels and this freedom of motion is *Descent*'s biggest attraction.

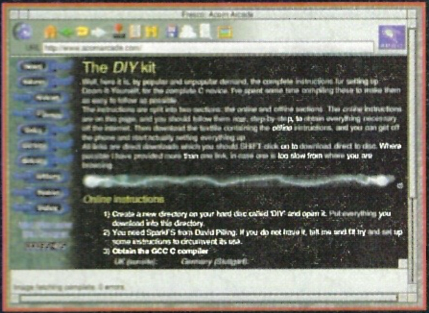
Heroes of Might and Magic II is the other game RCI are hoping to release this September; a strategic role-playing game created by The 3DO Company and New World Computing, and the recipient of various *Editor's Choice* awards. *Heroes 2* follows the power struggle taking place between Archibald and Roland Ironfist as they squabble over their deceased father's kingdoms. Once you have chosen your loyalties, you can set about gathering armies and engaging in battle.

The game's graphics are very nice indeed, and the mechanics present the player with a host of spells and artifacts to use, as well as hordes of monsters to destroy. One of the game's main features is that up to six people can play at once by taking turns at the controls. The original supported network play and it is as yet unclear as to whether this will be available in the Acorn port. Although of most interest to those of us who take an interest in role-playing or mythological games, *Heroes 2* looks set to be another premium conversion to add to the Acorn portfolio. Last but not least, the *AcornQuake* conversion is nearing completion, and will be available for Acorn World '98, with a little luck.

R-Comp Interactive have also released several patches and utilities for games already on the shelves, including the long-awaited network support for *AcornDoom*, and updates for *Syndicate+* and *Ankh*. Although the *Doom* v1.01 update isn't included on this page, it's still well worth a trip for the array of level editors and Total Conversion installers that are available. Take a look at *http://www.rcomp.co.uk/leisure/dload/dload.htm*

News snippets

I've just heard from Artex that they'll be marketing a sequel to their original platform game, *Botkiller*, due to be released at the Acorn World show for a price of £10. They're still hard at work writing *Tek*, but we might have to wait longer than initially planned for the release of the game. That's the bad news; however, I've heard rumours that Frank Foehl, creator of the still-embryonic *Iron Dignity*, is working alongside Artex and that both *Tek* and *ID* should benefit from this alliance. More news as it happens.



The *DIY* kit

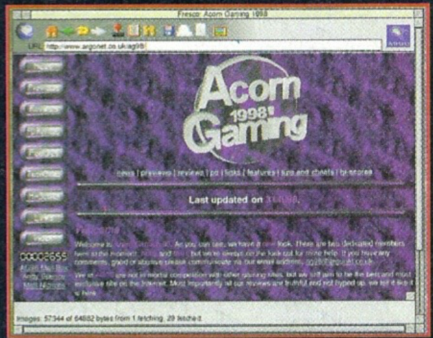
Online instructions

1) Create a new directory on your hard disc called 'DIY' and open it. Put everything you download into this directory.
2) You need SparkFS from David Pilling. If you do not have it, tell me and I'll try and set up some instructions to circumvent its use.
3) Obtain the GCC C compiler

UK (source): Germany (Stuttgart):

The *AcornArcade* website has been continually expanding since Game Show last paid it a visit, and in response to the many people who have been experiencing difficulties gathering and building Andreas Dehmel's *Doom-It-Yourself* pack, the team have put together a comprehensive set of instructions that cover everything from downloading the individual components to compiling the final executable. The details are available at *http://www.acornarcade.com/features/gamesupport/doom/index.html*

The DIY section isn't the only *Doom*-related material to be hosted by Acorn Arcade; there are also areas dedicated to reviews of the best WADs available, *Acorn Doom* FAQ lists, cheat codes and level walkthroughs, although at present the latter section is rather sparse. It's good to see this support commitment for an Acorn title – since we don't see a continuous torrent of new releases, it seems sensible to make the most of the games we've got.



Last updated on

Images: 57344 of 64882 bytes from 1 fetching, 29 fetched

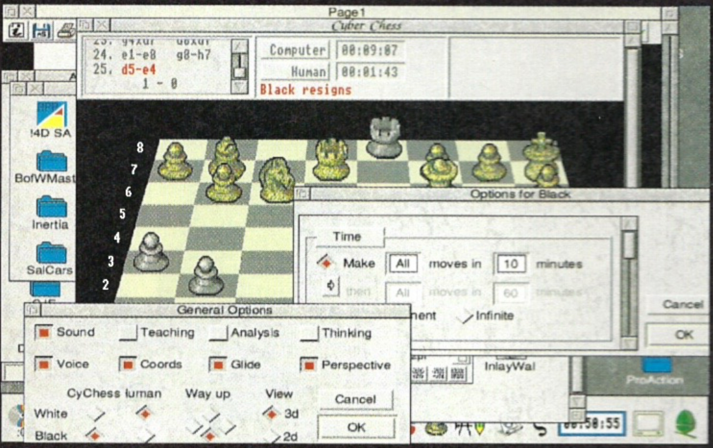
Finally, I just have time to mention Andy Spence's *Acorn Gaming '98* WWW pages – containing games news, hints and tips, reviews and links, Andy's site is another refuelling point for those on the lookout for information. I'll take a close look at the site and review the material in a future issue; until then, you can take a look yourself at *http://www.argonet.co.uk/ag98/* See you next time.

PRODUCED by The Fourth Dimension . . . . THE Acorn Games SPECIALISTS

We're back ...

After briefly being based on the Isle of Man The Fourth Dimension is now based in Worthing as part of the CJE Micro's group. We already have a number of new games and edutainment, planned for the coming months with two new titles featured on page 3 of this advertisement. We are not going to stop there though, see our new web site at http://www.cje.co.uk/4d/ for the latest information. demos, screenshots and compatibility details.

Cyber Chess


Page1
Cyber Chess
!4D SA
BofWMast
Inertia
SaiCars
Options for Black
General Options
ProAction
InlayWal
Cancel
OK

24. e1-e8 g8-h7
25. d5-e4
1 - 0
Computer 00:09:07
Human 00:01:43
Black resigns

Time
Make All moves in 10 minutes
then All moves in 60 minutes
Infinite

Sound ☑ Teaching ☐ Analysis ☐ Thinking ☐
Voice ☑ Coords ☑ Glide ☑ Perspective ☑
CyChess Human: White, Black
Way up
View: 3d, 2d

"The definitive chess-playing program"

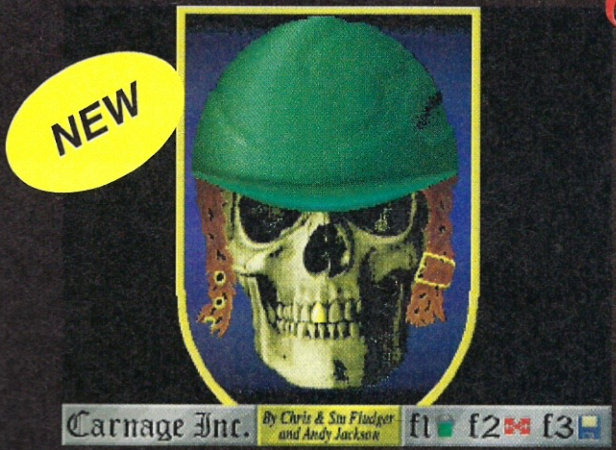
Cyber Chess represents one of the highest-specification chess-playing programs available for ANY home computer. We have a detailed specification available - call for a copy - but some of its main points are:

Superb 3D Simulation
RISC OS compliant
Fide rules
Takes full advantage of higher spec machines

Even now, five years after its release, nothing matches it.

For RISC OS 3.1 and above, inc StrongARM
Requires 2 Megabytes £35.00

Real McCoy 6


NEW
Carnage Inc.
By Chris & Stu Fludger and Andy Jackson
f1
f2
f3

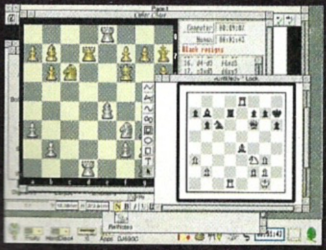
"This four-game collection really is the Real McCoy"

The Real McCoy 6 contains a veritable selection of gaming fun for all the family. Contained within are:

Technodream, the action-packed shoot em up
Silverball, our recent pinball hit
BloodLust, a rather strange platform game
Carnage Inc, a perspective adventure

Presented in a nice case, this special collection offers total value for money, for all the family.

For RISC OS 3.1 and above, inc StrongARM
Requires 2 Megabytes £35.00



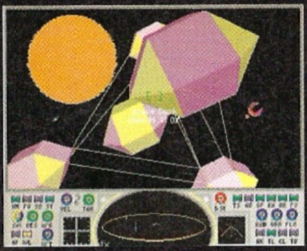
SILVERBALL
© 1997 THE FOURTH DIMENSION

CHOOSE DIFFICULTY
E EASY
A MEDIUM
H HARD
Blood Lust
Code
David Johnston
Graphics
Mike Goatly
Music
Adam Hay
WILL
SHUG

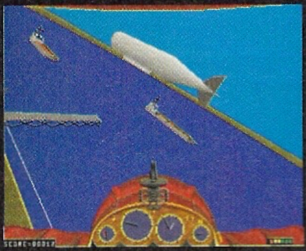
The Fourth Dimension, 78 Brighton Road, Worthing, West Sussex BN11 2EN
Tel: 01903 213361 Fax: 01903 523679 Email: 4d@cje.co.uk Web: www.cje.co.uk/4d/

Prices and specifications are correct at the time of going to press. All prices are fully inclusive. E&OE.

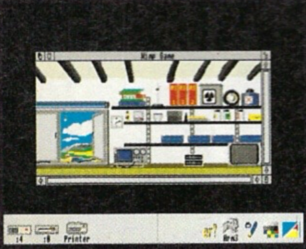
PRODUCED by The Fourth Dimension . . . . THE Acorn Games SPECIALISTS



Black Angel - £30



Chocks Away - £30



The Wimp Game - £20

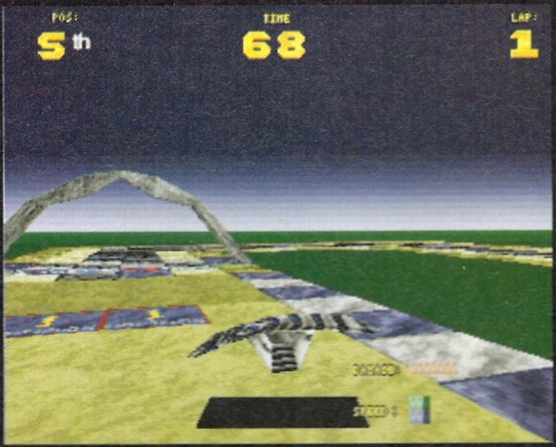
SC 00001000 HI 00250000 TIME
BD CR
LT
106

Drop Ship - £20

Spobbleoid - £30

Enter the Realm - £25

Drifter


POS:
5th
TIME
68
LAP:
1

"The racing game of the future ... wooshhh!"

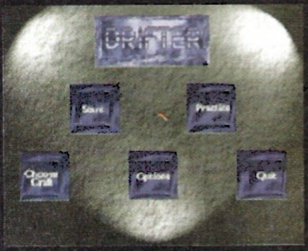
Drifter really is a racing game at it's very best. Following on from smash-hit titles Stunt Racer 2000, E-Type 2 and Powerband, 4D have a game from Andrew Docking which can only be described as being the future of racing.

There's no wheels - just air - underneath your vehicle, which slides and woooshes through six tracks across a number of difficulty levels. To qualify for the next track, you have to .. erm ... win. Now just in case you missed it, the moral of Drifter is to WIN, WIN, WIN!

Features include:

256 colour graphics with no letterbox modes
High quality music and sound effects
The superb Perpetual Motion graphics engine
Extra craft for Risc PC users • Hidden extra cheat mode!

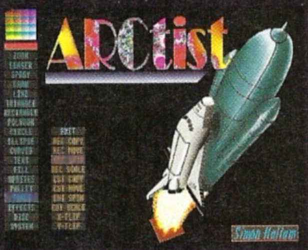
For RISC OS 3.1 and above, inc StrongARM
Requires 2 Megabytes £35.00


DRIFTER
Start
Practice
Choose Craft
Options
Quit

SCORE 017180
HIGH 100000
NEVRYON
POWER
SHIPS

Nevryon - £20

Chopper Force - £30


ARCtist
Simon Hallam

ARCtist - £20

X-Fire - £20

Grievous Bodily 'Arm
Score: 0101020
Lives:

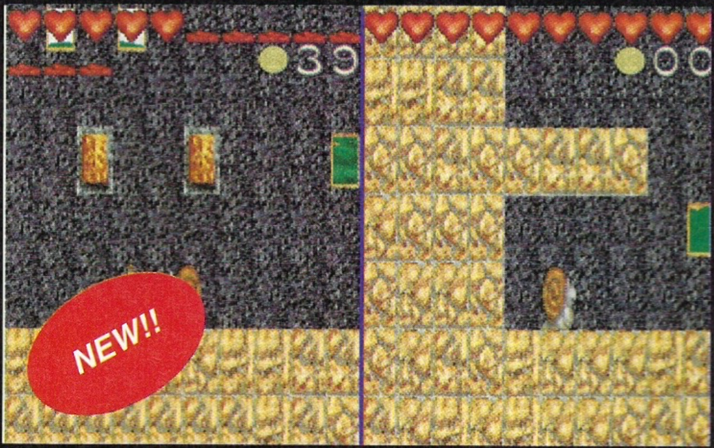
GBA - £20

Pandora's Box - £20

The Fourth Dimension, 78 Brighton Road, Worthing, West Sussex BN11 2EN
Tel: 01903 213361 Fax: 01903 523679 Email: 4d@cje.co.uk Web: www.cje.co.uk/4d/
Prices and specifications are correct at the time of going to press. All prices are fully inclusive. E&OE.

PRODUCED by The Fourth Dimension . . . . THE Acorn Games SPECIALISTS

Super Snail



"A game that just plain feels good ..."

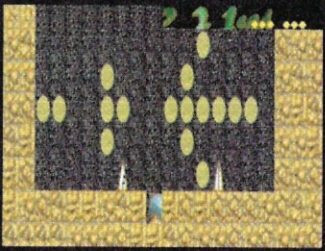
Super Snail places you in the control of Sam the Snail. Sam's a snail quite unlike any other - infact, he's much faster than any snail you'll ever have met before. Sam has to move around Snalia, collecting all sorts of goodies whilst avoiding the various different adversaries along the way. Specifics ... look towards the screenshots for some hints!

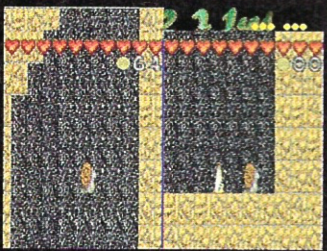
With the two-player option allowing for head to head play, or team play, Super Snail is guaranteed to be another 4D hit which you return to day in, day out.

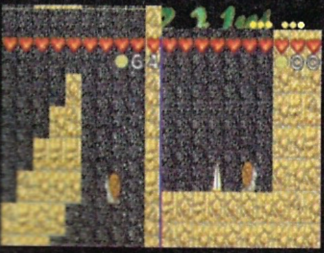
Features include:

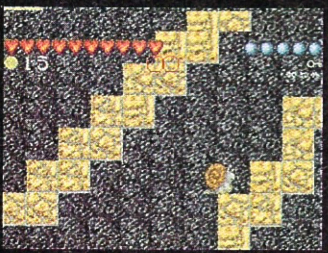
256 colour graphics with no letterbox modes
Unique two player option, allowing Sam to see his other self
Nice cute music - of course!
Unbeatable playability - you have to see it to believe it!

For RISC OS 3.1 and above, inc StrongARM
Requires 2 Megabytes £25.00

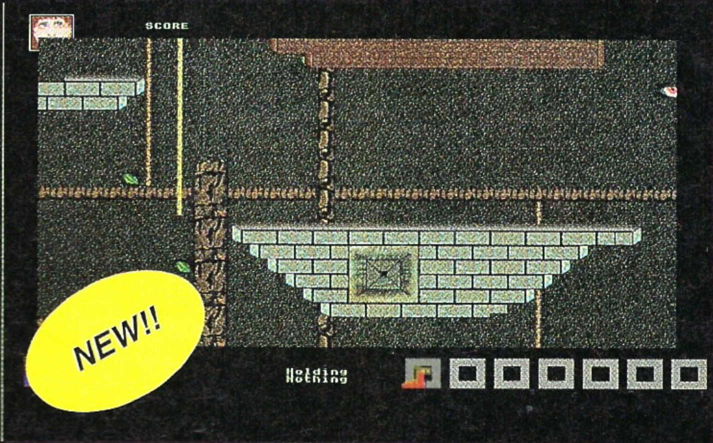








Morph



"Another classic adventure from 4D"

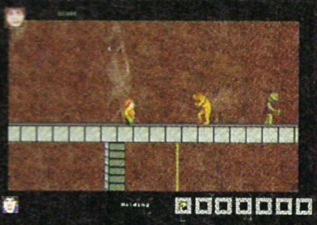
Morph is a massive new 4D adventure, from Dougie Frior; author of Pushy. Placing you in control of the lead character, you work your way around the castle collecting the bonuses and solving puzzles as the game progresses. The game is so technically superior to any previous release that it'll require a Risc PC to work at its best; but still works on an A3010 [with hard disc].

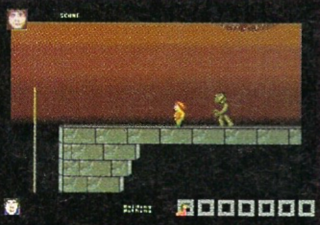
Special features of *Morph*

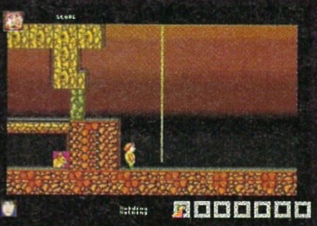
Varying degrees of graphic display to suit machines
Different skill levels
Many, many puzzles
Superb music and sonix

And anything we choose to add at the last minute!

For RISC OS 3.1 and above, inc StrongARM
Requires 4 Megabytes £25.00



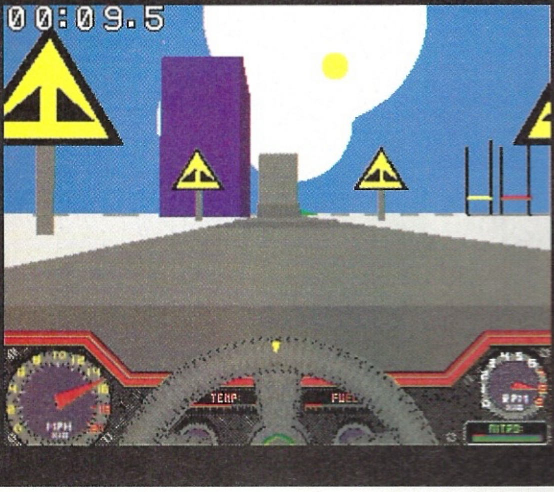




The Fourth Dimension, 78 Brighton Road, Worthing, West Sussex BN11 2EN
Tel: 01903 213361 Fax: 01903 523679 Email: 4d@cje.co.uk Web: www.cje.co.uk/4d/
Prices and specifications are correct at the time of going to press. All prices are fully inclusive. E&OE.

PRODUCED by The Fourth Dimension . . . . THE Acorn Games SPECIALISTS

Stunt Racer 2000



The year is 2037 and the world of motor sport has changed considerably to meet the demands of the excitement thirsty audiences. The World Federation Entertainments Network (Known as Fednet or WFE) broadcast to millions of viewers. Those who are brave enough to race win stardom; or become lost amoungst the mass of failed Stunt Racer 2000 drivers.

Those who complete the first 16 tracks get to race on the Supreme Stunt Racer track; a true test of a drivers skill and ingenuity. Pseudo technical design, with an arcade feel.

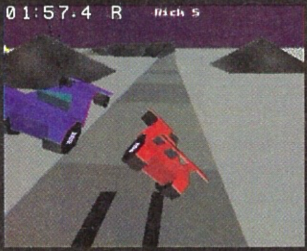
Features include:

Fast solid 3D vector graphic with a large selection of viewing angles and track side cameras; lots of sampled sound effects and plenty of ingame music; Two-player split screen or serial link options; 2-player 'Killer' mode and more....

For RISC OS 3.1 and above, inc StrongARM
Requires 2 Megabytes £35.00

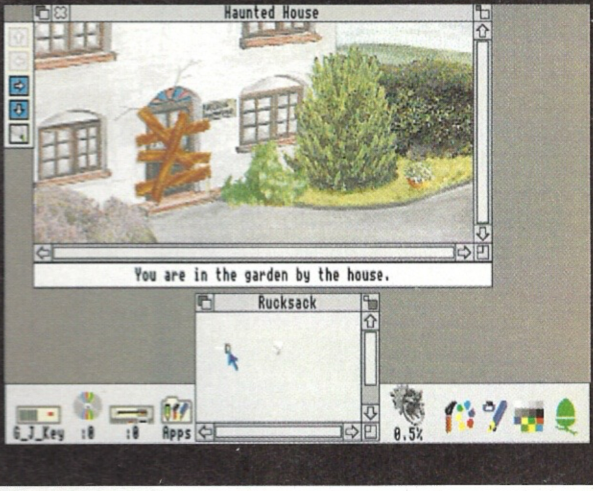
00:30.7
Rich S.

02:28.5
Jim Bob



00:27.9
Rich S

Haunted House



You are in the garden by the house.

The dawn breaks onto a fine autumn morning as you slowly drive into the tiny village of Lower Pigglesthorp and make your way to the old house in Hobbs Lane. The road is quiet and deserted. After parking your van around the back as instructed, you say to yourself ***'It's going to be a good day'.***

In all the years that you have been doing house clearances this one does some a little strange. Your client flatly refused to come with you; insisting that you would find everything you need on the premises.

He didn't even give you a key to the front door!

Oh! there was talk of ghosts - that's silly isn't it!

For RISC OS 3.1 and above, inc StrongARM
Requires 2 Megabytes £25.00

Haunted House
Rucksack

You are on the pavement by your van.

Haunted House
Rucksack

LEAVE THIS HOUSE!!

Haunted House
Rucksack

Page 32 of 'A general guide for the newly dead'

Haunted House
Rucksack

You are in the shed.

The Fourth Dimension, 78 Brighton Road, Worthing, West Sussex BN11 2EN
Tel: 01903 213361 Fax: 01903 523679 Email: 4d@cje.co.uk Web: www.cje.co.uk/4d/

Prices and specifications are correct at the time of going to press. All prices are fully inclusive. E&OE.

Round and around

Although US in origin, UK schools are invited to take part in a new interactive Internet project for secondary school students. Open to classrooms anywhere in the world, this collaborative project brings together teacher, amusement park designers and students for a hands-on design experience on the World Wide Web.

FERROUS
WHEEL
AN EDUCATIONAL RIDE

Ferrous Wheel is an 8-week, hands-on physics and maths challenge in which each classroom works to design either a Ferris wheel or a roller coaster for a virtual amusement park. Each participating class will comprise the team of engineers employed at Ferrous Wheel, Inc. The President of Ferrous Wheel Inc – otherwise known as *The Big Wheel* – will send weekly e-mails containing design assignments while her engineers e-mail project updates to her on a regular basis. To assist her, TBW employs a team of expert senior engineers available to students by e-mail for technical questions arising during design and construction. These are professionals from the field of ride design, physics and maths.

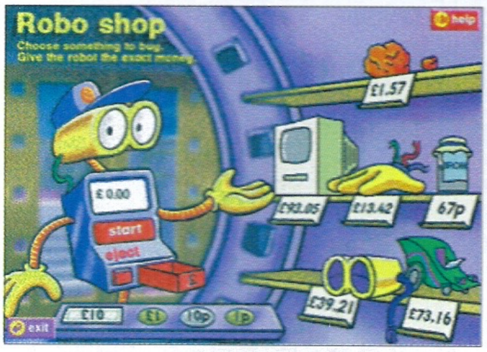
As well as the challenges participants receive all the background needed, with extra labs and practice maths problems online too. Starting this autumn, the course will also be repeated in April. Find out more at: http://www.onlineclass.com/Ferrous/home.html

Great explorers

Maths Explorer is aimed at Key Stage 2 children providing them with a virtual world of six 3D galleries to explore while solving everyday maths problems. These galleries cover: Number, Shape, Space, Measurement, Probability, Statistics and Calculation.

Each zone is divided into three core learning areas; *Learn About* provides detailed information and reference material as text, audio and animations. From here clicking on *Tell Me More* provides additional information, while *Investigations* features 19 puzzles and experiments.

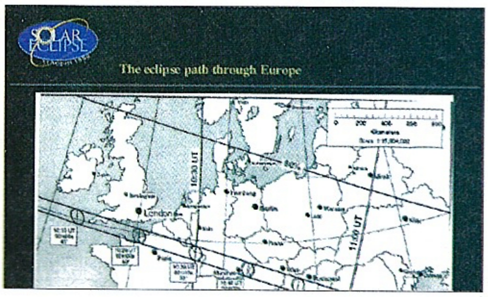
This could have you confronting a forest fire, the only way to stop the havoc is to correctly identify the angle and direct the fireman to the right place. You can test yourself at one of two levels or go for broke in the quiz in the *Game Zone*. Part of Granada Learning's (0181-547 3418) Autumn release schedule and priced at £59.99.



Sun watchers

If you live in Cornwall you'll have had this date in your dairy for some time – 11 August 1999. For the rest of us just catching on, this is UK Solar Eclipse day when the Isles of Scilly, Alderney and areas around Penzance and Plymouth will see a 100 per cent eclipse. If you live in the North of Scotland you'll have to settle for 70 per cent.

The PPARC (Particle Physics and Astronomy Research Council) are already preparing with a whole day of this year's British Association Festival of Science in September being devoted to the sun. There'll be physicists explaining why they study the sun, to setting up your own eclipse experiment, to looking at the sun using safe viewing techniques.



If you miss the event you can find out about the experiments, drama events, other eclipses from around the world, and the challenge of filming such events on the PPARC website (www.pparc.ac.uk) or at the UK eclipse website (www.eclipse.org.uk). Alternatively phone the National Eclipse Line on 0345-600444, it's open from 1-7pm Monday to Friday.

Contacting me

You can contact the Education page by writing to me, Pam Turnbull at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or e-mail: aueduc@idg.co.uk

Spreading it about

New from Anglia Multimedia (01268-755811) is *Spreadsheets Across the Curriculum*. This provides spreadsheet-based activities in mathematics, science, geography, design and technology and modern languages for Key Stage 3 and 4 using Anglia's *KeyCalc* spreadsheet package. *Spreadsheets Across the Curriculum* costs £30 but you will need a copy of *KeyCalc*.

Under-achievers

Student teacher Candice Hambridge from Canterbury Christchurch College is researching the claim that boys get poorer grades in school than girls and is following up the Channel 4 programme, "Why men don't iron". She would particularly welcome evidence and information from teachers who adjust their lessons to accommodate the fact that boys have a 5-minute attention span compared to 15 minutes for girls. You can contact her at: 22 Ivy Close, St Leonards, Ringwood, Hampshire BH24 2QZ.

New from the Beeb

Parents looking for new ways to get involved in their children's learning at home will soon be able to log on to a new BBC website for help. Part of the Beebs multimedia home-learning service, DynaMo, this offers fun, interactive activities for children and a range of useful services for parents.

Animated quizzes mix with interactive comic strips, timed maths and spelling games, hosted by two cartoon characters, DynaMo and SloMo. The activities reinforce key literacy and numeracy skills with three levels of difficulty catering for 5 to 9-year olds. There are also tips for parents on how to get the most out of each activity. In addition there is the *Ask an Expert* page, offering parents a chance to e-mail questions about their children's learning to a team of experts.

Practical suggestions for games to play at home are featured on the *Game Ideas* page and a forum called *Talk* allows parents to share ideas and queries. In addition there are links to other useful sites and recommended books for children. Just dial up: http://www.bbc.co.uk/education/dynamo

The BBC has produced a free, eight-page Parent Guide to accompany the DynaMo website, videos and activity books. This features practical suggestions to help parents and children with home learning as well as information on how to help children with reading, writing, numbers and shapes. For your copy call BBC Education Information on 0181-746 1111.

Acorn Strongarm RiscPC

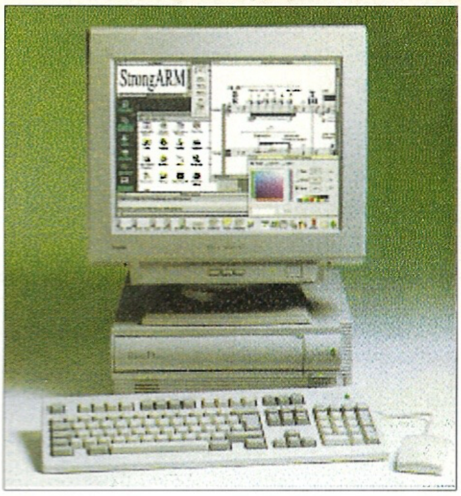
*** Now more affordable than ever ***

- ☐ 20Mb RAM
- ☐ 1.6Gb Hard drive
- ☐ 32 speed CDROM
- ☐ 233 MHz SA processor
- ☐ 15" AOC digital monitor
- ☐ Stereo speakers
- ☐ 1MB VRAM

Options

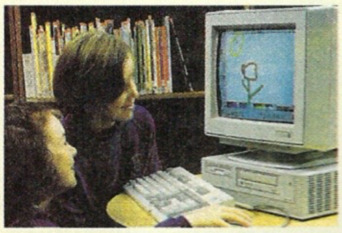
3.2GB Hard Drive - £30.00
17" monitor - £100.00
2MB VRAM - £20.00
32MB RAM - £20.00
Backplane - £29.00
586 PC Card - £95.00

Typical trade-in allowance on old systems
RiscPC - £450 A5000 - £200 A4000 - £125
Please phone for a firm quote



£825.00 +vat

Acorn A7000+ Multimedia system



- ☐ 32 Speed CDROM
- ☐ ARM7500FE processor
- ☐ 14" SVGA monitor
- ☐ 8MB RAM
- ☐ 12 months warranty

£745.00

Substantial discounts for quantity orders

Network A7000s also available

AOC 17" Monitor

0.26 dot pitch
30-85KHz Horizontal
50-130Hz Vertical
100MHz Bandwidth

£225.00

AOC 15" Monitor

0.28 dot pitch

£125.00

AOC 14" Monitor

0.28 dot pitch

£95.00

All AOC monitors come with a 3 year warranty and are compatible with Risc PC's

Second Hand Equipment

Computers	Monitors
RiscPC - £450.00	AKF60 - £65.00
A5000 - £225.00	AKF50 - £85.00
A4000 - £150.00	AKF18 - £75.00
A3020 - £125.00	AKF17 - £65.00
A3010 - £95.00	AKF40 - £65.00
A3000 - £65.00	CUB3000 - £55.00

A5000 Ethernet cards (BNC & RJ45) - £65.00
RiscPC Ethernet cards (BNC & RJ45) - £65.00

These are sample prices. Please phone for a firm quote and for availability.

Phoebe is Coming to Town

- ☐ 32Mb SDRAM
- ☐ 6.4Gb Hard drive
- ☐ 32 speed CDROM
- ☐ 4Mb VRAM
- ☐ 4 built in PCI sockets

Special Offers only from AJS
15" AOC monitor - £50.00
17" AOC monitor - £150.00
(When ordered with Phoebe)

Trade up to a new Pheobe

Typical trade-in allowance on old systems
RiscPC - £450 A5000 - £200
A4000 - £125 A3020 - £100
Please phone for a firm quote

£1499.00

All prices plus VAT and carriage (carriage £10.00 on larger items, postage £4.00 on small items)

Official orders welcome from Schools, Colleges, Government Depts. and nationally recognised PLC's Visa and Access accepted

AJS

Unit 28
East Hanningfield Estate
Old Church Road
East Hanningfield
Essex CM3 8AB

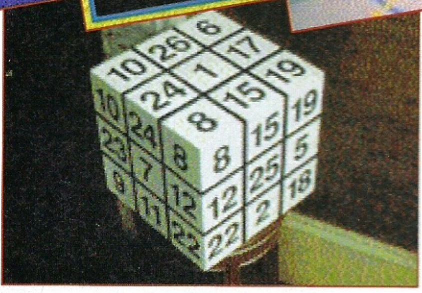
sales 01245 400066
technical 01245 400034
fax 01245 400014

email sales@ajscomps.demon.co.uk
http://www.ajscomps.demon.co.uk

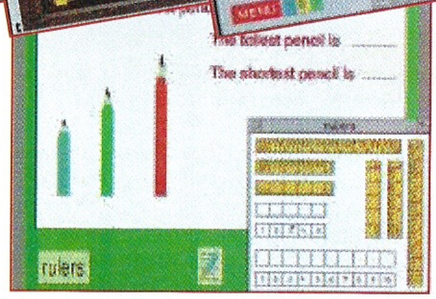
CENTRE OF TECHNOLOGY Acorn CENTRE OF TECHNOLOGY

Mathmania
Level 2
Maze 2
TO EXIT
YOU NEED
10
SCORE
What's the time Mr Wolf?
Analog
3

Numberlines



Pam Turnbull discovers what's available to help teach maths?


The tallest pencil is ....
The shortest pencil is ....
rulers

When you start looking for maths programs for the classroom you soon start to realise just how many there are out there. We've collated a few number specific ones here, though there are cross-curricular programs we'd love to have included but there just isn't room. In addition, if you have a copy of *My World* there are numerous support packs available for all ages. Prices given are for site licences – individual copies are generally cheaper.

Amazing Maths
Practise basic arithmetic skills exploring a maze where doors can only be opened by correct answers. As each maze is completed the mazes and questions get harder. Ages 5-7. *Cambridgeshire Software House (01487-741223) £24.95*

Animated Numbers
Watch as the numbers 1 to 10 come alive. Three adjustable activities to help young children learn number concepts. Comes with concept keyboard overlays. Ages 3-6 years. *Sherston (01666-840433) £39.95*

Breakaway Maths
Maths puzzles based on Alton Towers Theme Park in Staffs. Get questions right and you are rewarded with a full moving video clip of the rides such as Nemesis. Aimed at children with problems in maths. Ages 7-15. *YITM (0161-627 4469) £65*

Cars – Maths in Motion
Mathematics as a means to solving problems. Use multiplication, division, simple geometry, scales, bar graphs, strategy and percentages to win a car race. Ages 8-14. *Cambridgeshire Software House (01487-741223) £79.90(prim), £119.85 (second)*

Connections
Children alter the contents of each window to make the connections true, in a variety of maths activities including number, addition, subtraction, money, halves, quarters, odds and evens, graphs, shapes, place value, and so on. Ages 5-7. *Sherston (01666-840433) £31.95*

Crystal Rainforest
In their bid to save the rainforest, children must embark on an adventure solving problems as they do, each of which is a logo-based activities such as guiding a boat along a winding river. Ages 7-14. *Sherston (01666-840433) £84.95*

First Fings
Four activities: Using Dice, Sports Day, Matching and On the Ladders have children using numberlines, sorting, ordering, counting, matching, recognising numbers, and sequencing. Ages 5-7. *Resource (01509-672222) £25*

Magic Maths
Learning mental arithmetic will never be the same again. Designed for ages 5-11+ and using the ideas of snakes and ladders. Good use of options to make it suitable for your child's needs. *Creative Curriculum Software (01422-340524) £29.95*

MathMania
Escape from a maze by answering questions on Number, Time, Measurement, Angles, Shape/Space, or 'Lucky Dip'. Having escaped, children win bonus points by tackling puzzles such as the Towers of Hanoi, Fill It, Sliding Blocks, Magic Squares and Coins. Ages 7-14. *Topologika (01326-377771) £30*

Maths Explorer ★ COMING SOON ★
Numbers, shape, space and measures, handling data, using and applying mathematics, probability and statistics, and using calculators and computers are all covered. Topics are arranged within a virtual environment that pupils can move around and explore. In each zone children can investigate mathematical principles in action in everyday situations as well as exploring and discover essential facts. Ages 7-12. *YITM (0161-627 4469) £59.99*

Maths Factory ★ COMING SOON ★
You need to repair the cranky old machines in the Maths Factory in this adventure to recover the numbers which have disappeared. Deals with ordering, place value, addition up to two digits (with exchange) multiplication, division, fractions, negative numbers, function machines and so on. Ages 8-9. *Sherston (01666-840433) £75*

NumberPics
Children count the number of objects in a picture. In Find they click on the picture which matches the displayed numeral. Numbers (configurable in the range 0 to 10) can be spoken (real speech) if you wish. Ages 5-7. *Topologika (01326-377771) £25*

Number Tiles
Provides practice at number skills from simple addition, subtraction and estimation up to times tables for older children. For early learners, pictures can be used to represent the numbers 1-9 and dragged onto screen to complete a sum. Ranges of images are included or you can make your own. Ages 4-11. *Topologika (01326-377771) £25*

Numbertime: Adventures in Numberland
Learn to work with numbers 1-10, counting pictures, matching quantities, counting forwards and backwards, looking for patterns and sequences, putting numerals in order. Two other versions of the program are available covering Patterns and Shapes. Ages 4+. *Logotron (01223-425558) £27*

Pond
Aimed at developing number recognition, counting and comparison skills. Four activities practise core counting and estimation skills. Ages 4-7. *Resource (01509-672222) £25*

Primary Maths 1 and 2
Based on the ideas and resources from the Cambridge Primary Maths series. Two CD-ROMs have 11 colourful and animated sections: Sorting and Matching; Matching Sets; Introducing 1-5; Ordering 1-5; Introducing 0 and 6-10; Ordering 1-10; Counting and Comparing Sets; Towards Addition; Continuing addition; Shape, Weight and Length. Ages 5-7. *Sherston (01666-840433) £54.95 each*

Talking MathsBook
Allows children to practise addition and subtraction. Fully configurable, including size of sums (tens and units up to thousands and with or without decimals). A second volume is also available which concentrates on multiplication and division. Ages 5-7. *Topologika (01326-377771) £35*

Sea Rescue
The challenge is to undertake a daring sea rescue. The problems are maths-based and in particular are related to fractions. Ages 7-9. *Sherston (01666-840433) £44.95*

Smudge the Spaniel: Starting with Numbers
Comes in three parts: Writing Numbers where you trace around 0-10, count Smudge's favourite toys; Dot-to-Dot helps Smudge complete the outline of each picture by joining dots 1-30; Count and Colour paint scenes by answering sums reinforcing addition, subtraction and multiplication - 2,5 and 10 times tables. Ages 4+. *Storm (01935-817699) £25.99*

Space City
Series of challenges that introduce and develop the concept of angles in an adventure set in space. Ages 7-9. *Sherston (01666-840433) £44.95*

SUMone
Number recognition, counting, ordering, one more/less and times of the day are all covered using music animation and simple activities. Ages 5-7. *Resource (01509-672222) £30*

SUMthing
Mathematical problems on a strange planet has you ordering numbers, working with numberbonds, divisibility, number sentences, digital roots at different levels of difficulty. Ages 8-14. *Resource (01509-672222) £30*

SUMmore
Back on the planet but this time tackling place value, adding/subtracting 100s, 10s and units, filling tubs with moon custard by multiplying and then add timetables, coordinates, fractions, shapes, graphs, estimations of angles and strength. Ages 11-14. *Resource (01509-672222) £30*

Table Aliens
A maths adventure which teaches multiplication tables. Recruits to save the Earth from disaster must join a special task force and depart on 10 different activities which be accessed directly by teacher/parent or through the four adventures. Ages 8-11. *Sherston (01666-840433) £49.95*

The World of Number
Library of CD-ROMs: *Who Stole the Decimal Point?* is a simulation game. A virus has been introduced into the world's computer systems, and you go to Integer Hall to find it and save the world. Success comes to those who can find eight of the twelve keys which are hidden around the house – and each key requires the solution to a mathematical problem. *Picture Gallery* contains over 700 full colour photographs, each of which can be used as the basis for a range of mathematical tasks and activities. *Number games and Short Tasks* provides seven games where you see a video of students beginning to work out a problem and 13 tasks providing a battery of exercises which are suitable for use at the start and end of lessons, and for homework. Ages 10-16. *New Media (01491-413999) £79*

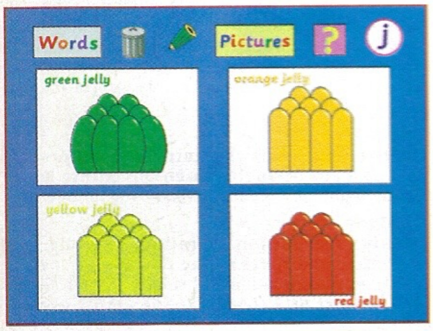
Minding your Ps and Qs

Pam Turnbull looks at a CD-ROM to make learning the ABC fun

Complementing the popular BBC TV schools programme, *Words and Pictures*, this CD-ROM aims to let Key Stage 1 children explore the letters of the alphabet using very simple graphics and a range of activities for each letter.

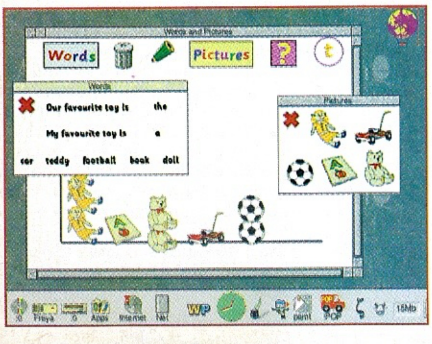
You start with an Alphabet Wheel and Magic Pencil, a happy-looking talking pencil who'll tell children what to do next. There's also a question mark on each page which will give instructions on specific actions or activities. The obvious thing to do with the Alphabet Wheel is to click on a letter.

Depending on the letter you've chosen you'll be presented with the three or four activity windows. These are split between sound, handwriting, context and play screens. What is constant for each letter is the Handwriting Screen.



The Magic Pencil shows the starting point and shows and tells you how a letter is formed. These screens benefit from being printed out allowing children to write over or under the letters themselves. A little confusingly there is an extra activity on this page too where you have to find the odd one out – find the picture which doesn't start with c, d, e and so on.

There are no instructions on screen though. As you click on each picture the name is written and spoken. As there is no finishing point you might want to use this section differently. We used it for story building as I didn't read the manual first. The Sound Screen comes with an appropriate picture for the letter and as with all the screens this animates when clicked. The activities vary here but mainly concentrate on initial letter sounds – though not for X. One option is an array of six picture frames and caption boxes. Click on *Words* or *Pictures* to open windows and match, though the pencil icon lets you type in your own words and drag them into position.



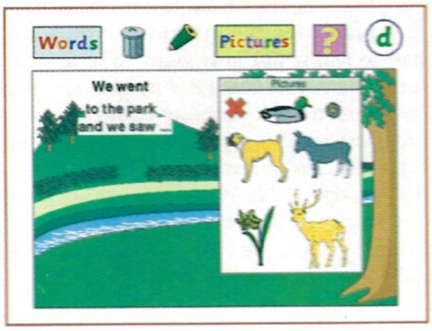
Our favourite toy is

the

My favourite toy is

a

car teddy football book doll



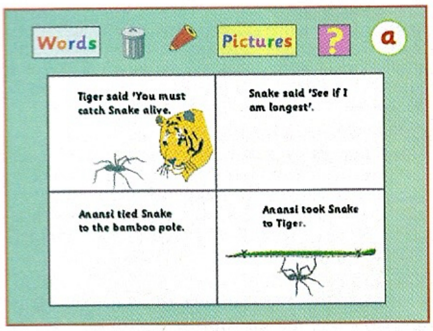
We went to the park and we saw ...

Other letters present you with a classroom or dining room where items need to be put into position and labelled. Words are spoken clearly when clicked into place and can be repositioned later. There is no *right* or *wrong* result and every screen can be printed. Other options for this screen are a black screen for you to add words and pictures to, a black screen and a set of objects and words which will make a picture, or a wheel where there one picture is the odd one out. With *o* you must match ox, og, ot and op to initial letters and pictures, while *u* asks children to put object *up* in the air or *under* the ground.

Context Screens provide a different range of activities, matching animals to environments, types of boats, creating pictures with words and pictures with the same initial letter sound, matching elephants to their silhouettes, label an animated scene, put hats on heads and add the right descriptive sentence, finish jelly jigsaws, post letters, and so on. These cover a range of skills and are nicely varied and work well if used by individuals or small groups.

The Play Screens only appear for nine letters and take the idea of the Context Screen one step further. For instance, with the letter *a* children have four boxes into which they must put reconstruct the story of Anansi in words and pictures, while for *c* they need to add adjectives to cat actions. Some support other curriculum areas looking at seasons, maps, time and pets and their homes.

I liked the way *Words and Pictures* mixes in new sounds with the idea of sentence and story structure. However, some of the more puzzling screens do have a right answer but there is no help or feedback if children can't understand what is going on. The children worked out for themselves that the jellies only became animated if they finished and named them, and if they named the wrong jelly the words weren't spoken out loud.



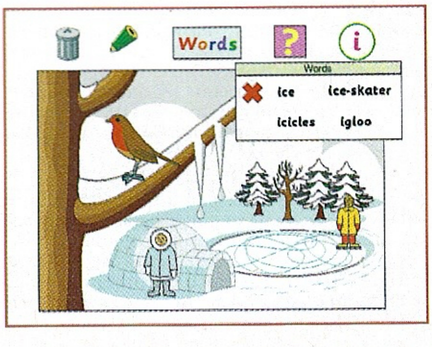
Tiger said 'You must catch Snake alive.'

Snake said 'See if I am longest'.

Anansi tied Snake to the bamboo pole.

Anansi took Snake to Tiger.

One of my groups enjoyed writing their own words a lot and didn't mind that these weren't spoken, another group decided that one child would be the writer, another the reader. Sometimes the graphics were too detailed for this age group especially when they had to reconstruct drawings. There is a drawfile format worksheet available for each letter on the CD-ROM too. A useful tool which will fit into the carousel part of the Literacy Hour.



Product details

Product:	Words and Pictures
Ages:	5+
Price:	£24
Supplier:	Logotron
Tel:	01223-425558
Web:	www.logo.com

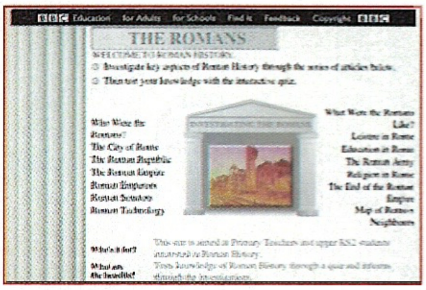
Free for all

Educational websites that are fun are sprouting up all over. **Pam Turnbull** reviews a handful of the most interesting and useful

Romans

http://www.bbc.co.uk/education/romans

Part of the BBC's Learning Station this is a nice one-off activity. Aimed at 7-11 year olds and teachers, you can investigate key aspects of Roman history through the series of articles: Who were the Romans?, The City of Rome, The Republic, The Empire, Emperors, Senators, Technology, Leisure, Education, The Army, and The end of Empire among others. You can then see how you do on the 12 multiple-choice questions. Not a huge site, and there are no links to other sites. Useful in the classroom but not for research.

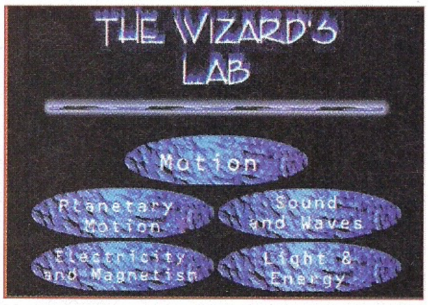

BBC Education for Adults for Schools Find it Feedback Copyright BBC
THE ROMANS
WELCOME TO ROMAN HISTORY
Who Were the Romans?
The City of Rome
The Roman Republic
The Roman Empire
Roman Emperors
Roman Senators
Roman Technology
What Were the Romans Like?
Leisure in Rome
Education in Rome
The Roman Army
Religion in Rome
The End of the Roman Empire
Map of Rome's Neighbours
INVESTIGATING THE ROMANS

The wizard's lab

http://library.advanced.org/11924/

Nicely designed site with sections on: Motion, Planetary Motion, Sound and Waves, Electricity and Magnetism, Light and Energy plus a quiz (broken down by subject or all-encompassing) and a glossary.

For instance, click on *Motion* and read a brief introduction to the concept and then take the time machine to discover what or who causes motion. This will take you to illustrated pages on Aristotle's, Galileo's and Newton's work on the subject, all laid out as conversations with the great men. An interesting approach which explains the theories of Einstein, Copernicus and Kepler, as well as introducing imaginary characters such as Spark. A good one for students who are having problems with these subjects.

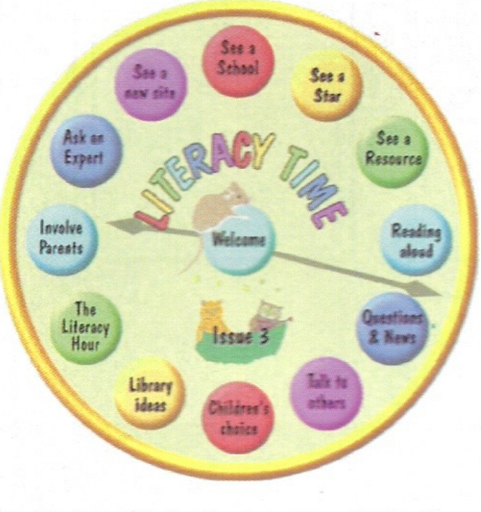

THE WIZARD'S LAB
Motion
Planetary Motion
Sound and Waves
Electricity and Magnetism
Light & Energy

Literacy time

http://vtc.ngfl.gov.uk/resource/literacy/index.html

One of the activity areas on the Virtual Teacher Centre, this offers opportunities to share and exchange practical ideas to help with the delivery of the National Literacy Strategy.

Updated termly, there have been interviews with Art Attack's Neil Buchannon on his favourite books, reports and help for reluctant readers, annotated booklists for Reception to Year 6 – covering such subjects as bullying and step-families, items on authors Dr Seuss and JRR Tolkien, practical ideas such as the children in Gateshead using video-conferencing to exchange stories with other schools around the world, Literacy Hour range statements from the National Literacy Project, ideas on how to involve parents (and grandparents) in the classroom, and so on. A strange collection but some useful items and ideas crop up.


LITERACY TIME
See a School
See a Star
See a Resource
Reading aloud
Questions & News
Talk to others
Children's choice
Library ideas
The Literacy Hour
Involve Parents
Ask an Expert
See a new site
Welcome
Issue 3

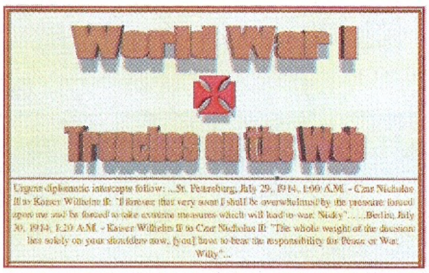
World War 1: Trenches on the Web

http://worldwar1.com/

A comprehensive site for anyone interested in the origins and day-to-day minutiae of the First World War. In particular I found the telegrams between the Tsar and Kaiser fascinating.

There is a large section of biographies and a notification of site update service. There's a timeline, information and photos on weapons and troops, various reproductions of documents concerning the war, artwork from the Great War including paintings, drawings, posters, photos and detailed maps.

Currently there are actual recordings from the period – some from a vintage 1918 Victrola in the Multimedia Room – there's even a section on trivia. A discussion forum is up and running, and there are links to other sites and even a keyword search facility. If the sheer mass of information bothers you, there are theme-based guided tours. A superb resource illustrated by contemporary quotes and illustrations and supported by a solid bibliography. Keep an eye on this as it continues to grow.


World War I
Trenches on the Web

Urgent diplomatic intercepts follow: ...St. Petersburg, July 29, 1914, 1:00 A.M. - Czar Nicholas II to Kaiser Wilhelm II: "I foresee that very soon I shall be overwhelmed by the pressure forced upon me and be forced to take extreme measures which will lead to war. Nicky"... ...Berlin, July 30, 1914, 1:20 A.M. - Kaiser Wilhelm II to Czar Nicholas II: "The whole weight of the decision lies solely on your shoulders now, [you] have to bear the responsibility for Peace or War. Willy"...

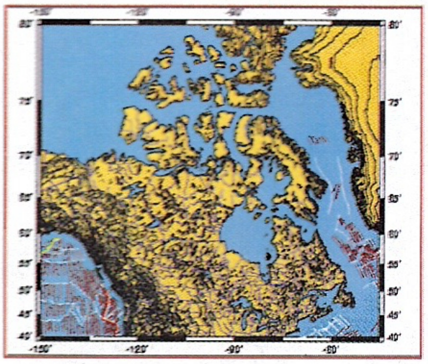
Online map creation

http://www.aquarius.geomar.de/omc/omc_intro.html

Create maps by filling out a form and you'll get a PostScript file for downloading and a GIF version on the browser. If you already have a specific area in mind fill in the map boundaries expressed as latitudes and longitudes.

Correct terminology is used throughout, but it is also well explained with information on how these values have to be entered and what the script does with your entries depending on the map-projection you've chosen.

Give the geographical coordinates of the map boundaries in decimal notation – tips and examples are provided, then fill in the options. Do you want political boundaries, rivers, tectonic stresses and so on shown in the final version. Once created you can zoom in or out or define a new map center just by clicking.


-150°
-120°
-90°
-60°
80°
75°
70°
65°
60°
55°
50°
45°
40°

You may opt for plotting sets of locations on your maps: some 600 major cities worldwide, plus DSDP and ODP sites. The latter two are places where the Ocean Drilling Program (ODP) and its predecessor have sent ships to sample rocks from below the sea. You could also plot a specific city or *You are here* by entering three strings in the text box, for example, 2.1666, 41.35, Barcelona (Catalunya). Fascinating – with the uses not just confined to geography.

Visit us on the Web! - http://www.firstcomputers.co.uk/

Late Opening Wednesday & Thursday until 7.30pm

Open Sunday 11am to 4pm

FIRST COMPUTERS

DELIVERY CHARGES

●2-4 Week Days	£5
●Next Week Day	£7
●Saturday Delivery	£25

Delivery per order, not per item. Subject to availability

Tel: 0113 209 4444

Fax: 0113 209 4445

E-Mail: sales@firstcomputers.co.uk

Showroom Address:
Dept. ACU, Unit 3, Armley Park Court
Stanningley Road, Leeds. LS12 2AE

Please allow five working days for cheque clearance. Prices are correct at the time of going to press. Please check latest prices before ordering. All sales are subject to our standard terms and conditions of sale. Copy available upon request. E&OE. Dated 8/9/98

SWITCH VISA DELTA MasterCard Lombard Finance

FIRST COMPUTER CENTRE
EASY ACCESS FROM M62, M1 and A1
KIRKSTALL RD
LIVING WORLD
FARNELLS
A64/A58
LEEDS CITY CENTRE
YORKS POST
BRADFORD
MIKES CARPETS
A647
ARMLEY GYRATORY
ARMLEY
M62/M621

AUTHORISED REPAIR CENTRE

Our in-house engineers can offer you a no-obligation FREE estmate of repair on your Acorn or any computer peripheral. A delivery tariff of just £5.00 is charged or alternatively, visit our large showroom. We can also arrange for your items to be collected by courier for an additional charge of £12.00

Hard Drives & Controllers

2.5" IDE Hard Drives

120Mb	£65	810Mb	£120
250Mb	£75	1440Mb	£160

3.5" IDE Hard Drives

2.1Gb	£100	7.6Gb	£189
3.2Gb	£110	8.4Gb	£204
4.3Gb	£115	10.2Gb	£241
		12.0Gb	£259

Other specifications available, please call.

1 Way Backplane (A7000)	£40
2 Way Backplane (RPC 6/700)	£35
IDE Card (A3010 **or** A3000)	£76
SCSI Card (A30x0/A4000)	£116
SCSI II (RPC/A300/400/5000)	£116

Money off your new hardware purchases!

Call for pricing now to part exchange your old items, and get real value for your unwanted monitors, printers, memory, computers, etc.

Memory

Risc PC / A7000 Memory	
4Mb 72 Pin (1*32) 60ns SIMM	£8
8Mb 72 Pin (2*32) 60ns SIMM	£13
16Mb 72 Pin (4*32) 60ns SIMM	£17
32Mb 72 Pin (8*32) 60ns SIMM	£35
Risc PC VRAM 1Mb	£69
Other Machines	
A3010 1Mb to 2Mb	£44
A3010 1Mb to 4Mb	£67
A3020/A4000 2 to 4Mb	£53
A5000 2Mb to 4Mb	£60

Software

Delivery just £1.50 per title, or £3.99 for 4+

Application Software	
ArcComm Version 2	£54.00
Arcfax Version 1.13	£27.00
Artworks v1.54	£79.00
Acorn L.4 Fileserver	£469.00
Revelation 2	£80.00
Sibelius 6 Version 3.5	£99.00
Junior Sibelius!	£45.00
Termite Internet	£85.00
Titler	£84.00
Turbo Driver V4 Canon	£47.00
Turbo Driver Epson	£47.00
Turbo Driver V4 HP	£47.00
Zip Drive Acorn Driver	£34.00
Entertainment Software	
Burnout	£18.00
Champions Compil.	£15.00
Cyberape	£15.00
FistLore	£22.00
Games Wizard	£7.00
Naughty Stories Vol 1	£45.00
Naughty Stories Vol 2	£49.00
Sally And Wally	£24.00
Sim City 2000 (A5000)	£30.00
Oxford Reading Stage 2	£41.00
Oxford Reading Stage 3	£41.00
Oxford Reading More	£41.00

4D Entertainment Software	
4D Break 147 & S/Pool	£27.00
4D Drifter	£31.00
4D E-Type 2	£26.50
4D Logic Mania	£27.00
CD Software titles	
3 Little Pigs For Arc	£33
Artworks Clip-art 1 or 2	£16
Artworks	£79
Cars - Maths In Motion	£59
APDL DTP-2 Clip Art	£10
Goldilocks	£44
KingfisherMicropedia	£79
Map Skills	£40
Oxford R/Tree Stage 2	£46
Photobase - Landscapes	£56

Acorn Software Clearance Sale

All titles reduced plus many hardware discounts

Top PC CD-ROM Games	
1. Tombraider 2	£30
2. Quake 2	£33
3. Monkey Island 3	£30
4. Dark Forces 2	£34
5. MS Flight Sim 98	£40
6. Bladerunner	£34
7. I-WAR	£24
8. F1GP 2 (M/Prose)	£34
9. Actua Soccer 2	£28
10. Fifa Soccer 98	£32
11. Scrabble	£24
12. Worms 2	£31
13. Total Annihilation	£30
14. Total Racing	£33
15. The Simpsons	£20
16. Screamer Rally	£25
PC Software	
Windows 95 Release 2	£60
MS Office Pro 97	£180
MS Encarta 97 Enclyc.	£40
MS Encarta 97 W/Atlas	£35
Ency. Of Science (DK)	£28
Ency. Of Nature (DK)	£28
History Of The World	£28
My 1st Incred.Dict.	£22
Ultimate Human Body	£28
The Way Things Work	£28

Printers

Printers V1.53 is recommended for use with most printers. (£2.50 on a HD disk, £5 on DD Disks.) Also, please see software section above for prices on Turbo Drivers. Please contact us for further details.

All our printers include a free data cable worth £5!

Canon

BJ-30 Mono Inkjet 720 x 360 DPI Entry Level Printer. 30 Page ASF Built-In	£159
BJC-80 Colour Inkjet *NEW* 720 x 360 DPI Colour Printer. 30 Page ASF Built-In	£189
BJC-250 Colour Inkjet 720 x 360 DPI. Mono & Col. Carts Supplied. 80 Page ASF	£95
BJC-4300 Colour Inkjet 720 x 360 DPI. Dual Cart. Drop Modulation Technology	£129
BJC-4650 Colour Inkjet 720 x 360 DPI. Up to A3 Colour Printing. Dual Cart Printing	£265

CITIZEN COMPUTER PRINTERS

ABC 24 Pin Dot Matrix 300 DPI. 50 ASF Built-In. Optional Tractor Feed at £35	£89
Printiva 700C 600DPI Colour, 1200DPI Mono. Advance Micro Dry Tech.	£292

EPSON

Stylus 440 Colour Inkjet 720 x 720 Superb Entry Level Printer. 100 Sheet ASF	£132
Stylus 740 Colour Inkjet 1440 x 720 DPI. 6ppm Black, 4ppm Colour. 100 Sheet ASF	£228
Stylus 850 Colour Inkjet 1440 x 720 DPI. 8ppm Black, 7ppm Colour. 100 Sheet ASF	£268

HEWLETT PACKARD

HP-340C Portable Colour 600x300DPI Mono, 300x300DPI Colour 2ppm Mono	£199
HP-400l Colour 600x300DPI Mono, 300x300DPI Col Both Carts inc.	£87
HP-690C Plus Colour 300x300DPI Colour Printing Now Even Faster	£180
HP-890CXI Colour 600x600DPI Mono, To 8PPM/600x300 Colour To 4PPM	£256
HP-6L Mono Laser 600DPI, 1Mb RAM, 6 Pages Per Minute Printing	£289
Dual Parallel Printer Switchbox Includes cable. Other types & specifications also available	£13

Cables

This is only a selection, Please call

Acorn 3020 2.5" HD Cable	£5.99
Acorn A5000 2nd HD Kit	£19.99
Null Modem 9DF-9DF	£9.99
Null Modem 9D -25DF	£9.99
Null Modem 25DF-25DF	£9.99
Serial Printer Cable 9DF- 5DM	£9.99
Serial Printer Cable 25D -25DM	£9.99
Serial Modem Cable 25D -25DM	£9.99
Straight Through 25DF-25DF	£9.99
Straight Through 25DM-25DF	£9.99
Straight Through 25DM-25DM	£9.99
Modem Cable 9DF-25DM	£9.99
Modem Cable 9/25DF-25DM	£14.99
Null Modem 9/25DF-D/25DF	£12.99
Parallel Printer 3m	£10.99
Parallel Printer 4.5m	£11.99
Parallel Printer 10m	£19.99
Parallel Printer 1.8m	£4.99
Parallel Bi-Di Printer	£4.99
Dual IDE Cable	£9.99
A3010 - Scart	£12.99
A3010 - Acorn AKJ17	£12.99
A3000 - Scart	£12.99
A3000 - Acorn AKf30/40	£9.99
Dual Telephone Adaptor	£6.99
Telephone Extension 3m	£4.99
Telephone Extension 5m	£6.99
Telephone Extension 10m	£8.99
Telephone Extension 15m	£10.99

Zip / CD-ROM

iomega Zip Drive Only £121

- Includes One 100mb Cartridge
- Available In SCSI Or Parallel Vers.

Acorn Zip Tools Software Drivers	£34
Zip Drive 100mb Media (each)	£10
Risc PC SCSI Interface (16 bit)	£116

Risc PC (Risc OS 3.6/3.7) CDROMS

8X IDE	£49	24X IDE	£69

Manufacturers vary. Please confirm before ordering

Dual IDE Cable	£10
Parallel Oscar 4X CDROM	£288

Miscellaneous

Upgrades & Spares	
RiscOS 3.1 Upgrade (No Manual)	£44
Acorn/Logitech Mouse Ball	£6
RiscPC Serial Mouse (Std PC)	£5
A3010 Midi Starter Pack	£123
MIDI Cables (2x3 Metre)	£10
A3010 M/Podule ,IDE & PSU	£112
Accessories	
Quality Mousemat (4mm)	£3
3.5" Floppy Drive Head Cleaner	£2
80 Cap. Banx Lockable Disk Box	£10
PC Cards	
486 SX-33	£117
5x86-100	£351

All prices are inclusive of VAT @ 17.5%

- *Full text handling and style recognition*
- *EurekaTable and Tablemate table support and conversion*
- *Bitmap and Draw graphic handling and web production*
- *CMYK, RGB and HSV colour support*
- *Definable link colours*
- *Meta Options*
- *Links Database*

HTML *Pro*

Ovation Pro to HTML Converter

available 16th october 1998
acorn world prices start at £40

Levens SOFTWARE
pressing the right buttons

Freephone 0500 121 242
Email software@levens.co.uk
Web www.levens.co.uk/software

Dave Acton and **Dave Lawrence** present more good stuff to blow your mind

star info

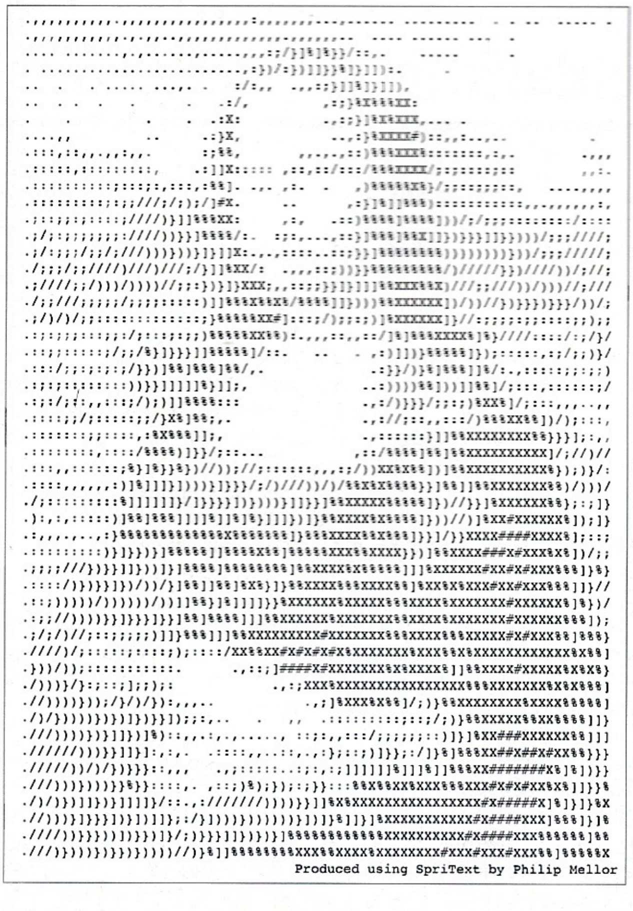
A picture's worth a 1000 words

Author: Philip Mellor

If you studied Computer Science at university, the chances are that at some point or other you ended up with a sheet or two of line printer paper covered in dots, ats and hashes. If you squinted at this from the other side of the junior common room, you'd just be able to make out Mickey Mouse, the Starship Enterprise or some half-naked woman standing on a stool.

Smaller 'ASCII art' pictures are often included in e-mail sig lines. If you've ever tried to make one of these by hand, you've probably discovered that unless you want either a space invader or some sort of frog, it's incredibly tricky.

This is where **Philip Mellor's** *SpriText* comes in. This is a straightforward little application that converts sprites into a suitable collection of punctuation. Make sure the filer has 'seen' *ChangeFSI* before running the program, as *SpriText* makes use of its scaling and conversion routines. To convert a sprite, drag it onto the *SpriText* window and then just drag the text file icon to a directory viewer or an application such as *Edit*. Complicated pictures do not always turn out well, so try something simple with large areas of similar colour.


Produced using SpriText by Philip Mellor

Scale sprite – The program automatically adjusts the scale of the output to approximately 70 characters wide (ideal for an e-mail), you can adjust the scaling by hand if you want another size.

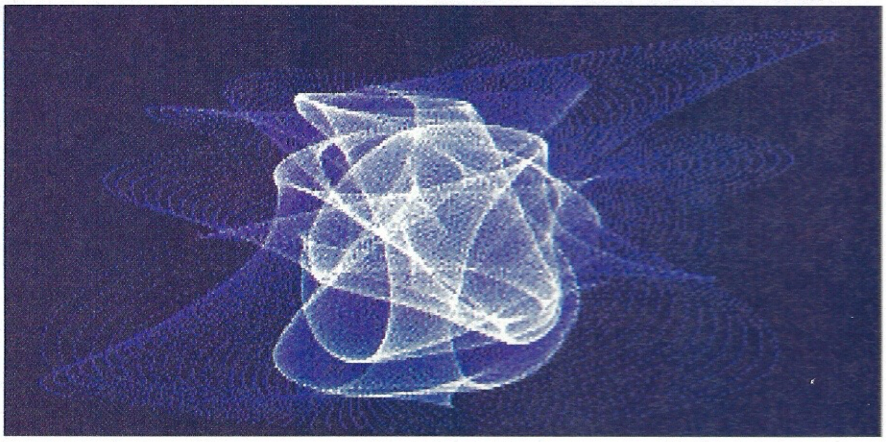
Pixels – The conversion process uses 16 symbols to represent 16 greys. You can change the symbols used by editing these icons. Alternatively, you can drag a textfile in the window and the first 16 characters will be used.

The *Trim Edges* option ensures *ChangeFSI* doesn't leave a dark edge along the top and right sides. *Sharpen* sharpens the image before conversion and *Invert* makes a negative version of the image.

Finally *Half Height*, should be on if the text is to be seen in a font which is taller than it is wide (such as *Edit*). In screen modes such as 27 or 9, it should be turned off.

Curve crawling

Author: Thomas Madams



If you are in need of a twisty fix, **Thomas Madams** has send us a trio of bendy demos to keep you wired. Tom starts off with *Bezier*. Not surprisingly this little prog is based around our old friend the bezier curve. Tom explains that for a long time these curves were a mystery to him, and it was not until he came across an old guide to *Draw* that he found an explanation of the maths behind them. The curve with control points PQRS is described by the point r thus:

$$\mathbf{r} = \mathbf{P}\,(1-t)^3 + 3\,\mathbf{Q}\,t\,(1-t)^2 + 3\,\mathbf{R}\,t^2\,(1-t) + \mathbf{S}\,t^3$$

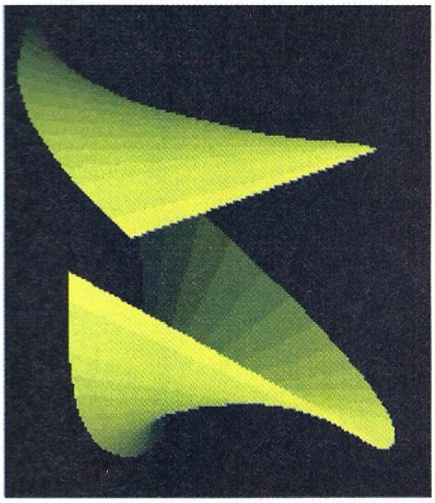
for values of t from 0 to 1. Obviously both x and y co-ordinates need to be evaluated.

Tom's program uses a piece of ARM code to draw the curve and a short bit of BASIC to move the control points around the screen. The curve is plotted in the time-honoured way of incrementing the pixel value on the screen; this results in a very pleasing display.

Tom's second bendy demo is an attempt to recreate one of the effects seen in the Playstation game *SoulBlade*. The purpose of this game is to stand in a ring and beat your opponent to a bloody pulp with a big stick. What the game lacks in cerebrality (is that a word?) it more than makes up for in graphics department.

Blade was written to try to emulate the 'swooshing' effect made by the protagonists' swords. Tom apologizes for the lack of 3D, transparent, light-sourced polygons, but his faded yellow triangles do a remarkably convincing job. Finally from Tom is *Coaster*. This brings all the fun of sitting on a small round bit of cardboard into your own home.

No, that can't be right – it's the dot-to-dot interpretation of the Pepsi Max ride. Tom says this was his first experiment to see if he could emulate a ride on a roller coaster, as he points out you do have to use your imagination a bit (try getting the dog to scream a little and then throw your spectacles away) and it doesn't make you grip the sides of your seat (unless you've just had 18 pints of Heavy), but it does give a reasonable sensation of moving up and down. Anyone interested in souping up the fear factor?



A light in the darkness

Author: Justin Fletcher

Justin Fletcher writes:

'On my computer the SCSI drive is noisy. I mean really very, very noisy and irritating. So much so that while booting you can't actually tell if it is still working or if the machine has crashed. And because it is a SCSI drive it doesn't flash the 'disc activity' light on the front of the box.

'So, I wrote *ActivityHD*. What this does is 'make the pointer lighter' when a filing system call is made. This means that all HD activity now flickers the pointer and I can leave the computer miles away from me and not care about the 'true' light on it.

'You can also begin to see how much files are accessed when you wouldn't have expected it. Like SpriteExtend 1.04 plotting JPEGs to a 256 colour mode.

Slower and slower...

Justin's second utility this month is *SlowTW*, and at first sight is not the most obviously useful program:

'On occasions while programming I found it very irritating that the TaskWindows default 'speed' is not alterable. At the moment I'm compiling a 'large' project which requires about six hours to make at present. [We're interested in what could possibly take six hours to compile! – Ed.] During this time the computer is completely unusable, even if run in a taskwindow, because the taskwindow causes the computer to slow to a virtual halt.

'The usual solution is to leave the computer compiling overnight. However, there are times when even this solution is not a good idea – I'd like to work on one part of the project while my changes to another part are compiling themselves and telling me about errors. *SlowTW* is a single application slower (if you try it in multiple taskwindows, only the last takes effect.). With it running, compilation is obviously very slow, but the computer is still actually usable and the desktop is still responsive.

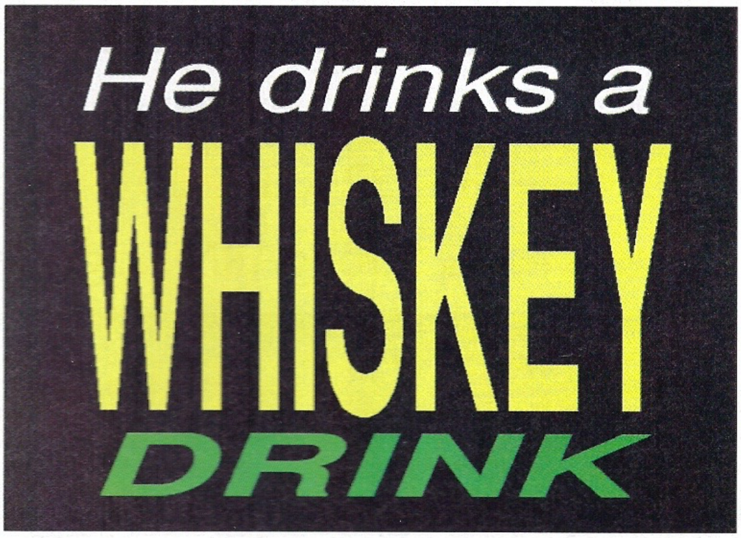
'To turn on the slower, type *SlowTW <speed> in the relevant window. <speed> is the time in centi-seconds between which you want the Taskwindow to run. 200 would therefore make the taskwindow run its things every two seconds. Given that on a normal A5000 the time between polls is of the order of 0.15 centi-seconds, this means that the taskwindow is going to run very slowly — obviously if you are running a quite intensive Taskwindow process this time would be larger anyway. Because of this, the <speed> you specify will be taken to be the minimum time between polls of the taskwindow. Whatever time the poll of the taskwindow took is also added on to this time as well.

This means that if you specify <speed> of 15cs, but on a particular poll the Taskwindow takes 60cs to run (say it is performing some intensive SWI operation), the next time it will be polled is 60+15cs from the time it finished that poll. That is, it is penalised for the time it takes performing its own functions. If it returned immediately, it would only have to wait 15cs for the next poll.

To disable the slower, use *SlowTW 0. However, this will only ensure that the taskwindow receives every poll going, except for those within the period it takes to run. Since the Taskwindow seems to use a timeslice of about 15cs, it would seem that times under 15cs will have little effect. To completely disable SlowTW, *RMKill SlowTW is your best bet.

I get knocked down

Author: Marc Warne



He drinks a

WHISKEY

DRINK

Marc Warne was very bored one day. So bored in fact that he spent a not inconsiderable amount of time writing *Tubthump*. All it is, is the lyrics to *Tubthumping* by *Chumbawamba* displayed in real time to the music, the good bit is that rather just a small bouncy ball or even just scrolling text, the whole screen is used to display the words really big and really colourful.

It has been tested with the *Tubthumping* single, *Smash Hits 98* and *Now 38* (but strangely not the album itself — unfortunately I've lent my copy out so cannot confirm the 'offset' you would need). To see the words, first load up one of the CDs into your CD-ROM drive, run the program and enter the track number and offset (some suitable offsets are suggested). The CD will then by played and the lyrics displayed.

Some of the fonts used are rather large and it may take some time to display them. To avoid any unpleasant update glitches, first give yourself a nice large font cache (1Mb is suggested) and run the program with a CD-ROM drive of '-1'. This makes the program run without any waiting, so all the fonts used will be cached. Running the program again with correct values will display the text without a hiccough.

The program works by making use of the CD SWI call "CD_EnquireAddress" which returns the current position on the CD, this is used to flag when to change the display.

Double-action Lockit

Author: Adam Scott

We've provided various utilities in the past to prevent general monkeying around on networks and these seem to prove particularly popular with teachers, although I can't imagine why. **Adam Scott** is the creator of the latest.

LockIt was written to prevent such shenanigans going on at Pool School in Cornwall. Although games are generally forbidden on their network of 70 or so machines, the occasional 'almost-game' like *Tetris* is permitted, but only outside lesson time. In the library though, even the likes of *Tetris* are banned at all hours of the day.

Lockit was created to police the network, allowing certain applications to be 'forbidden' in two ways – by machine or by time.

Double-click to run *LockIt* on your server. Now choose a directory or application that you wish to lock and drag its icon onto the padlock – the main *LockIt* window will appear. This provides details about the program and locking options. You will probably need to edit the full pathname, so it is compatible with the network filing system.

For example, if you dragged *TextEase* onto the padlock, the pathname *ADFS::Network.$.TextEase* might be shown. Alter this to *AppFS::Network.$.TextEase* since most of your network machines will not use ADFS.

Now select the restrictions you wish to place on the directory or application and confirm.

You will need to ensure that your stations run *LockIt* in their Boot sequence, so copy it into *!Boot.Choices.Boot.Tasks* or wherever as appropriate.

Access may be restricted either by station number, or time. Station numbers may be explicit (e.g. 128.234) or use wildcards, such as 128.06* which will block out all stations from 60 to 69.

Time restrictions are provided as 24 hour clock times, separated by commas, e.g. "08:00-12:00,13:00-15:30". The periods given are those for which the locked applications are unavailable. To unlock an object, drag in the same way and click on *Unlock*.

To complete the protection, you will also need to change the *!Run* file inside *LockIt*. Here, several options are set using system variables:

LockIt$Icon – set to FALSE to stop users from unlocking objects

LockIt$Quit – set to FALSE so the user cannot quit the task from the Task Manager window

LockIt$Init – set to FALSE if no message is to be shown when *LockIt* starts up

Adam is working on the next version of the program and we will bring you news of it when it arrives. It will probably be a little friendlier to use (although in some respects, you want such utilities to be very unfriendly so would-be hackers aren't tempted to fiddle) and will sport more control options. Watch this space...

Teletextra

Author: Alex Macfarlane Smith

Every now and then we come across a utility which is so obscure that we think *who* would need that? But of course, there is always *someone* who does. So it will be with this module from **Alex Macfarlane Smith**.

It very cleverly allows snapshots to be taken of Mode 7 screens. This is currently impossible with *screensave – you just get reminded that it "is not a graphics mode".

To use, just double-click on *Snapper* to install and then save a screen from the teletext mode using:

```
*snapshot <filename>
```

Another command is provided to convert a mode 7 file into a sprite file:

```
*convert <filename>
```

This will switch to mode 9 and then replace the mode 7 file with a sprite one. Alex has also provided a little utility *Mode7->9* – just drag and drop any mode 7 files onto the icon to convert.

For completeness, a SWI interface is provided: SYS "Snapper_Snapshot" and SYS "Snapper_Convert" perform the equivalent of the * commands above. The source code is also included on the cover disc.

UPGRADES from UNIQUEWAY

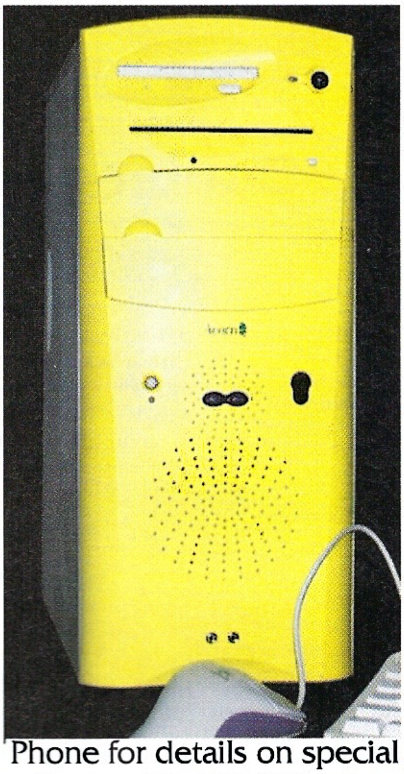
Can't afford a PHOEBE 2100?

Why not give your current Risc PC an upgrade and overhaul.

Bronze service	Risc OS 3.7 and exchange 2GB HD	**£179.00**
Silver service	as bronze plus 32 x IDE CD	**£239.00**
Gold service	as silver plus StrongARM upgrade	**£400.00**

All the service upgrades include insured courier collection and return of Risc PC, exchange of current hard disc for new drive, transfer of data from your current drive onto the new drive, fitting and testing of CD and StrongARM (where appropriate), thorough cleaning of interior of Risc PC and erasure of old data on hard disc before disposal. Please ensure that all data is backed up before despatch as we cannot insure against loss of data whilst the machines are in transit. The service is offered on a nominal 5 working day turnaround. If you already have some items then please call for a quote on the exact items you want fitted. Please confirm with your original supplier that any software you intend to use is StrongARM compatible if you opt for the Gold Service. Machines must be returned in either their original packaging or similar quality boxes.

StrongARM Upgrade including RiscOS 3.7	**2Gb Drive** supplied on its own	**32x CD** supplied on its own
£219.00	**£105.00**	**£62.00**



Phone for details on special offers on Phoebe 2100.

RISC DISC 1

£10 inc VAT

RISC DISC 2

£10 inc VAT

RISC DISC 3

£15 inc VAT

ALL 3 CD's FOR ONLY £25

The Risc Disc was the first low cost CD designed to act both as a resource and a demo disc for users who had just bought a Risc PC with CD-ROM and want something to show off its features to their friends.

It contains 5 main sections on the disc each accessible from the Risc Disc front end which is a graphics based browser and searcher. The five sections are:-

Commercial demonstrations
PD/Shareware files
Photo-CD images
Resources
Useful Text Files

Following on from the success of The Risc Disc Volume One major features in Risc Disc 2 include even faster page display from CD and over 600MB of data.
Contents include PD/Shareware, Commercial Demos, Resources files including Artworks, AVI, MPEG, FLI, MIDI, Digital Symphony, Armadeus, Replay, Sprites, Drawfiles, JPEG, Electronic Books etc. A special section of info and resources for Clan members and finally a complete interactive Virtual World Wide Web.
Using the PD browsers and commercial Web browsers you can explore over 100MB of Web pages from around the world without having to actually own a modem.

Following the features of The Risc Disc One and Two, Volume 3 has sections on Commercial Demos, PD/Shareware, Resources files (including Artworks, MIDI, Replay, Sprites, Drawfiles, JPEG, GIF, Electronic Books) and much more.
The PD / Shareware section has the latest software and includes over 30 Games, 35 Graphics programs and 28 Internet utilities, in fact over 400 programs in total.
Essential utilities include ZAP and StrongED as well as a large number of graphics files and utilities suitable for creating your own Web pages.
A major feature is the full 1.2 Release of RiscBSD along with the latest StrongARM info and updates from Acorn.

All prices INCLUDE VAT

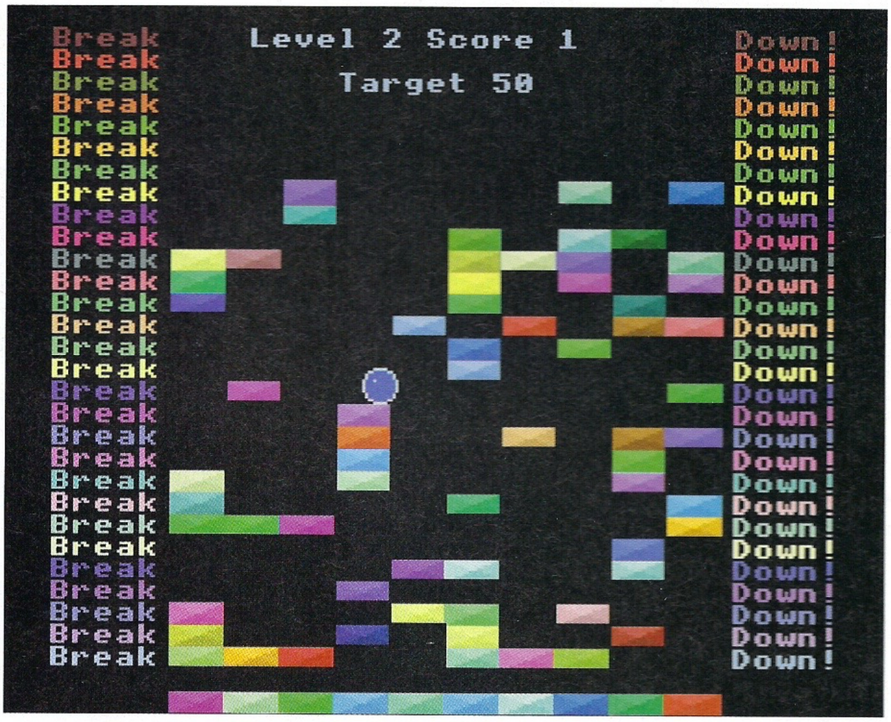
POSTAGE and PACKING £2.00 inc VAT All items subject to availability.

Uniqueway Ltd - 3 Clarendon Road, Cyncoed, Cardiff, CF3 7JD
Tel: 01222 464020 Fax: 01222 440071
www.uniqueway.co.uk
email: sales@uniqueway.co.uk

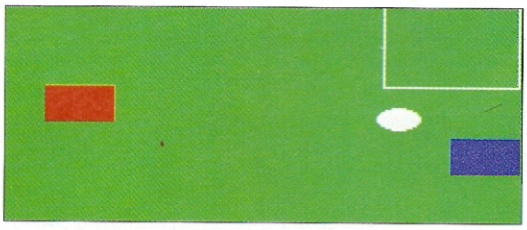
Hubble bubble

Author: Nigel Stoner

Nigel Stoner claims that *Cauldron* contains frogs legs, bats' wings, cats' eyes and dragons' blood. Surely anyone can tell that if a potion contain cats' eyes there'd be a long line of shiny reflective things floating about in it. Whatever the ingredients, once the initial drawing phase has settled down, *Cauldron* does produce a satisfyingly seething brew. If we were to continue our Playstation-game-effect challenge, the bubbling sinks in the chemical levels of *MicroMachines* do spring to mind. Nigel has also sent us a pair of 1K games, The first, *Footy*, is a lovingly recreated homage to the early bat and ball TV games (although I clearly remember mine being black and white!). This version is clearly football (as you have two players) and not tennis in which you obviously only have one.



You are the red team and control your players with the mouse. The computer is the blue team and exhibits a fiendishly cunning AI subroutine (but if you hit the ball with the top of your bat, er, player, it'll put a sharper angle on it and possibly stun the computer).

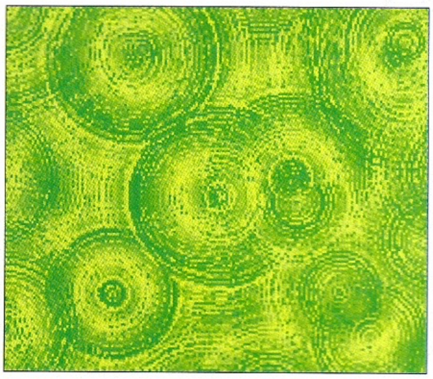


The second game *Breakdown* brings us kicking and screaming into the '80s and was originally written by Nigel on an ST. The imaginative use of the 256-colour palette is particularly impressive.

The object of the game is to bounce your ball onto as many of the bricks as you can. When you fall off the screen at the bottom, the computer counts all the remaining bricks, if it's less than the target, you can continue onto the next level. You control the ball by moving the mouse Left and Right. Small movements allow the ball to bounce over one brick at a time, large movements allows the ball to jump across several bricks.

- Try to stop on the highest level of bricks at all times.
- Learn how far to move the mouse to make small bounces and great leaps.
- Don't go too near the edge where it says 'Break' & 'Down', you'll fall off the blocks.
- Learn the 'Stepping Stones' technique to bounce up some levels to retrieve some lost blocks.
- Avoid 'Nutting' bricks from the underneath, they make your bounces unpredictable.
- Try 'Nutting' missed bricks from underneath to make up extra points (see above).
- Avoid dropping down big holes in the bricks (hard).
- Every game is the same, to let you get at that annoying Level 4 time and time again!

Can you beat Nigel's personal best: Level 9, 611 points?



Clip-on

Author: Chris Beesley

A couple of add-ons for users of iSV's *Mr Clippy* clip-art manager now, courtesy of **Chris Beesley**. Although Chris has found the application very good, he came across a couple of shortcomings so wrote two quick Basic progs to get around them. We trust other *Mr Clippy* users will find his fixes equally useful.

"*Mr Clippy* has the ability to store compressed versions of clip files for quick viewing while leaving the original source file on the original media. This is great, until you come to drag a clip to *Draw* or whatever, and the original is somewhere else. It might be on a CD-ROM for instance. If this is the case, *Mr Clippy* pops up a message box to tell you that file so-and-so is not available. Unfortunately, *Mr Clippy* shows the file name in truncated form, so if you have originals stored on several Zip discs or removable hard discs, the displayed information may not be enough to locate the file."

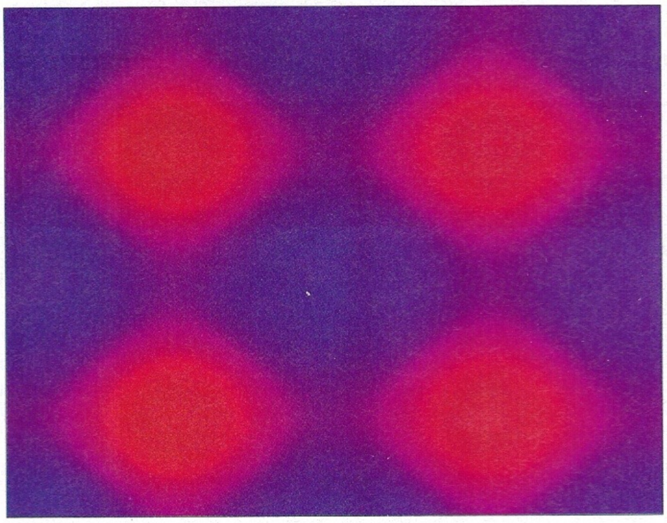
Chris's first fix, *Searcher,* displays long file names as used internally by *Mr Clippy*, enabling you to find them. You should run it after quitting *Mr Clippy*. Just enter the name (or part of the name) of the object you are looking for and the program will check through all of *Mr Clippy*'s records (this may take some time).

The search is not case sensitive. For example, "bear" might match "TeddyBear", "BBearing" and "grizzlbear". Some objects are stored compressed within *Mr Clippy*, in which case the original source file will not be shown. Instead, the line in the search output will tell you that you can drag the clip direct from *Mr Clippy* itself.

The second utility, *Sorter* should also be run only when *Mr Clippy* has been quit. Use it after adding one or more new groups. The utility simply sorts the names in the Group menu into alphabetical order. *Default* is left at the top of the menu.

Sinspot

Author: Graham Stratton



We don't need to make a pun out of the program title, since it already is one. **Graham Stratton** goes on to describe his program as "useless" (we appreciate honesty in Help files), continuing "unless you want to make someone feel very ill by staring at a monitor." Well, seems good to us...

There are three versions – the original *SinSpot* runs in a 480x352 256-colour mode, generating a pattern by adding vertical and horizontal sinewaves. The mouse can be used to move the pattern about, but the strangest effects occur when just starting at the screen. The particular choice of colours makes it very difficult to believe that the screen isn't changing.

Graham wonders what it might look like on a 21 inch monitor. If you have one, it might be worth have a bucket handy before running it though.

Two other variations are provided – *SinSpotSM* which plots smaller spots, and a high-res version *SinSpotHR* which runs in a 1024x768 mode, but which doesn't look much different to the original in fact.

Logomania

Author: Jon Ripley

We've gone a bit logo potty at *info. First we published lovingly hand-crafted simulations of both the Channel 5 logo and the BBC balloon, and last month we launched our latest challenge – to create a logo for *info itself (we're still interested in late entries by the way – see last month for details). Now we've got a one-line Logo by **Jon Ripley**, and the Logo in this case has a capital Log, since it's a version of that ever popular programming language of yesteryear.

The commands supported are F (forwards), B (back), L (turn left), R (right), C (clear screen) and P (pen up/down), and can be separated with ':'.

To draw a triangle, use: *F100: R120:F100:R120:F100*. My favourite bit of the one line of Basic is *IFC=67RUN*. You just don't get commands like that any more...

My wife's gone to the West Indies

Author: Graham Crockford

A-level music student **Graham Crockford** is the composing force behind this MIDI offering. It was apparently written for an assignment over five weeks, with the brief of producing a 4-8 minute piece for four or more instruments based on a simple theme. The piece – *Jamaican Quartet* – opens with this theme and is written for guitar, two violins and a cello.

You will need MIDI hardware, or a software synth (*Synth* or *ReMIDI*) to play the piece since it's polyphonic. Enjoy.

*QUIT

All programs, applications, hints, tips, stuff and nonsense to our usual abode please:

***INFO, *Acorn User*,**
IDG Media, Media House, Adlington Park,
Macclesfield SK10 4NP

or, e-mail us (including your real address please) at:

austarinfo@idg.co.uk

No e-mails longer than 100K please. Screenshots, background info and ideas for customising your program are always welcome. Cover disc space is precious, so we regretfully cannot include vast applications, adventure games or tracker files, however much we like them.

Please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned. If you are responding to one of our challenges, please mark your envelope accordingly.

Compatibility table

Program	ROS 3.1	ROS 3.5+
TubThump*	Yes	Yes
SinSpot	No	Yes
SinSpot HR	No	Yes
SinSpot SM	No	Yes
Breakdown	Yes	Yes
Cauldron	Yes	Yes
Footy	Yes	Yes
!LockIt	Yes	Yes
MiniLogo	Yes	Yes
!SpriText	Yes	Yes
!Mode7-9	Yes	Yes
Snapper	Yes	Yes
Source	Yes	Yes
Bezier	Yes	Yes
Blade	Yes	Yes
Coaster	Yes	Yes
Activity	Yes	Yes
Searcher†	Yes	Yes
Sorter†	Yes	Yes

*Needs CD-ROM drive & CD
†Needs *Mr Clippy*

Association of Shareware Professionals™

Archimedes Public Domain Library

Public Domain, Shareware and other low cost hardware and software for Acorn computers

All prices include VAT and UK carriage except hard drives add £5 for internal drives, £8 external

This is only a fraction of what we have available. We also have thousands of discs full of PD and Shareware and around 500 discs of Acorn format clip art. For a full catalogue on 800K or 1.6Mb disc please send 50p or two 1st class stamps or visit our web site.

APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN
Phone: 0181 778 2658 *Fax: 0181 488 0487* www.apdl.co..uk/

Registered Developer

THE Datafile

Arch Angel The PD Library

3.5" IDE Hard Discs

	Drive	Plus i/face
210 Mb	£42	£81
420 Mb	£52	£87
540 Mb	£59	£107
850 Mb	£71	£118
1.1 Gb	£80	£127
2.1 Gb	£91	£138
2.5 Gb	£97	£144
3.2 Gb	£102	£149
4.2 Gb	£119	£166
4.2 Gb 5¼"	£115	£162
5.1 Gb	£126	£173
6.3 Gb	£144	£191
8.2 Gb	£176	£222
11.8 Gb 5¼"	£209	£256

'Plus i/face' price includes an APDL fast IDE interface.

2.5" IDE Hard Discs

	A3020	3010/3000
30 Mb	£36	£79
60 Mb	£49	£99
80 Mb	£59	£109
120 Mb	£67	£117
170 Mb	£72	£122
210 Mb	£84	£134
250 Mb	£89	£139
330 Mb	£94	£144
420 Mb	£99	£149
512 Mb	£123	£173
800 Mb	-	£188
2.1 Gb	-	£219

A3010/3000 includes APDL IDE interface, A3020 includes fitting kit

SCSI Hard Discs

210 Mb		£35
280 Mb		£44
420 Mb	h/h	£55
540 Mb		£68
1 Gb	h/h	£79
4.2 Gb	h/h	£159
4.2 Gb		£196
8.7 Gb	h/h	£359

'h/h' indicates half-height approx 1½ inches high, others are 1" high.

IDE CD ROM drives

Internal

Drive with all cables and drivers for RO 3.6+ where required

16x	£45
24x	£50
32x	£55

Drive including APDL IDE interface

16x	£92
24x	£97
32x	£102

External

Drive in case with power supply and including an APDL IDE interface. Probably the best way to fit a CD to a pre- RISC-PC machine.

16x	£149
24x	£154
32x	£159

CD ROM driver software

Works with most ATAPI CDs including Goldstar, Hitachi, Lite-on, Mitsumi, Sony, Panasonic, Samsung, Pioneer, Toshiba, Sanyo, NEC, etc.

Includes CDFS etc. so can be used with RISC-OS 3.5.

Intended for the RPC but can be used with an A5000 but as the drive can't be fitted internally you will need to keep cables short

Only £8 inlcuding UK carriage or £7 when ordered with a drive

APDL Public Domain, Clip Art and other CDs

APDL PD-1	The best PD CD from the best PD library. Over 1,800 programs and utilities, more than 100 novels, etc. No games, clip art, music, or other non-serious stuff.	only £12.50
		Both for just £22
APDL PD-2	Around 700 games and novelties, over 250 games cheats and over 200 demos, plus over 2,000 music files and more than 550 digitised sound samples.	only £12.50
DTP-1 and DTP-2	Each have over 500Mb of clip art files, all ready to use in Acorn Draw, Sprite or Artworks format. Ideal for use in education.	only £15 each
DTP-3	The third highly acclaimed APDL clip art CD. More than 720Mb of material. Grea for schools or anyone who needs a huge collection of clip art at a sensible price.	only £17.50
	Buy all three clip art CDs for just £17.50	
Games CD 1	A collection of twenty of the best PD games of all types. Ready to run direct from the CD on almost any machine. Hours of fun for an unbeatable price.	only £7.90
Education Resources	A CD from APDL especially for schools. Has all the things we know you want. More than 5,000 Acorn format clip art images, hundreds of e-texts, over 300 popular and useful programs. . . .	£16.50 Ten for just £79
Earth in Space	Pictures, databases, information on stars, planets, moons, space missions, etc. etc. A huge amount of data at a realistic price.	only £9.90
Wizard Apprentice	Have you got what it takes to become a Wizard? 100 levels of this great game with superb graphics and sound. RISC-PC only	new low price £14.95
Generation Design collection	New version now has eight games. AlfaXL5, Pharoahs Secret Tombs, Last Cybermoch, Sea Trek, Caves of Confusion, Robocatch, and two new additions, Gold Run and Jewels of Jezabar. Also available on disc.	£17.50

APDL ideA fast IDE interface

We have just introduced a new version of our famous IDE interface.

- No complicated setting up. It's self-configuring so just plug it in!
- Uses DMA (Direct Memory Access) on Risc PC. More than twice as fast as the built in IDE interface or others which don't use DMA.
- Includes CDFS and ATAPI CD drivers for many popular CD ROMs.
- Four devices, any combination of CDs and hard drives.
- Up to 8 partitions, so you can have large drives on pre RO 3.6 machines
- Software in flash EEPROM for easy update, including VProtect for earlier machines.
- Can use DOS formatted drives or removable discs.
- Supports the new range of Syquest SparQ low cost 1Gb removable drives.
- Connectors are available for external drives or CD ROMs

All these features for the incredibly low price of just £52

A version to fit the A3000, A4000, A3010 or A3020 is also available. This has all the above features, supports two internal and two external devices and costs just £67

Datafile PD CDs

PD CD - 3	£8.50
PD CD - 4	£12.50
PD CD - 5	£8.50

THE Datafile

Various games

Emotions	(RPC only)	£14.95
Flying High	(RPC only)	£14.95
Fire and Ice	(not S/Arm)	£8.50
Hero Quest	(not S/Arm)	£7.50
Quest for Gold		£6.00
Aries Collection	(not RPC)	£9.50

Syquest drives

The new Syquest SparQ drive is the ideal solution for your backup problems. It's big enough to hold a large amount of data, and discs are much cheaper than anything of comparable size, just £29. They can be fitted in the second floppy drive space in a Risc PC

SparQ internal IDE drive complete with two discs and APDL fast IDE interface. Solve all your backup problems for just £209

NEW - APDL printer port Syquest drive

At last - you can now get a Syquest SparQ printer port drive at a realistic price. The printer port drive isn't as fast as the IDE version but you can fit it to any machine with a bi-directional printer port (ie. anything with a hi-density floppy drive) and you can move it between machines. Complete with Acorn and DOS driver software. Special introductory price, just £199

NEW - Very fast SCSI interface

We are now UK agents for the ACE Connect 32 SCSI interface. We intend to produce our own, improved, software for this, but in the meantime we have a limited number at an incredible price. These are *very* fast, in fact, the fasteset SCSI interface I've tested at *any* price.

Connect 32 SCSI interface - £109

ACE 586 PC cards

Available with 128K cache from just £199 or 512K cach from £299. We can offer a trade in against your old card, which makes it even cheaper. Good performance for Windows at a sensible APDL price.

General software

Faster PC - £20 The alternative XT PC emulator. Works on any model with 2Mb RAM from an A3000 to a Strong ARM Risc PC.

PowerBase - £15 Ready-to-use version of the very popular and easy to use Shareware database. With examples, tutorials and printed manuals. Better than most products costing many times the price. This will do everything that 99% of database users need.

We are now the distributor for Graham Crow's Desktop Suite

MenuBar - £15 The very best pull-down menu system. An absolute essential for any hard disc user. You can switch between up to 30 different menu bars.

Tiger - £15 Lets you use very long descriptive filenames. Unlike some products this is very robust as it works in parallel with the filer so can't corrupt discs.

WorkTop - £15 Switch between up to 30 different working environments with a single mouse click. Stars up the tasks you require, opens directories, changes screen mode, it's just like moving to another computer. An invaluable productivity tool.

ProCopy - £15 The next best thing to an expensive auto loader. Can format, copy and verify discs and save the contents as a disc image on your hard disc. Works with 640K, 800K and 1.6Mb Acorn format and 720K, 1.44Mb and 1.7Mb DOS format. If you need to produce multiple copies of a disc you need ProCopy

On the receiving end

Mike Cook takes control once more

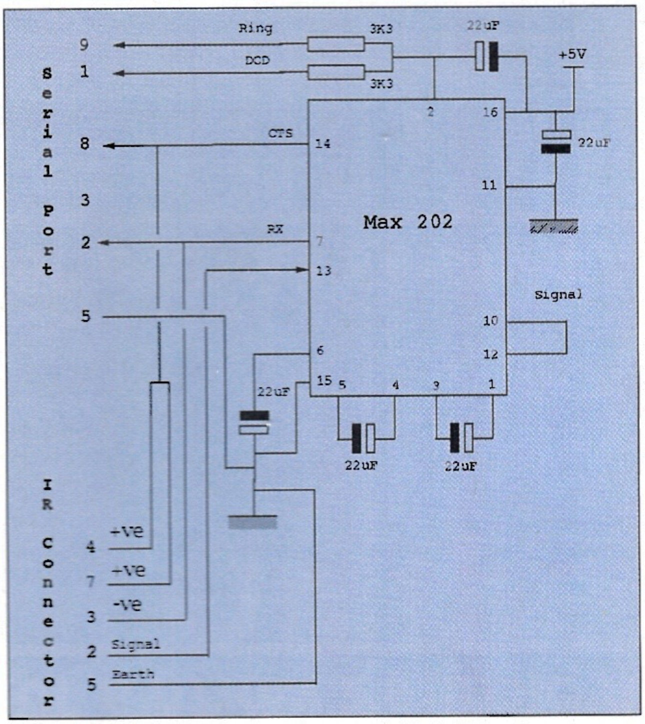


Figure I: Hardware needed if you have an RS432 Serial Port

This month I would like to show you how you can make an infrared remote controller for your computer. I have covered the transmission of signals before but never the reception, this is because all handsets are different and if I produced some software for one type it would not work with another.

However, browsing through my local Maplins store I came across the *Net Shooter*, an infrared handset designed specifically to operate with a computer. The only snag was that the computer was a PC. But with the aid of the Logic Oscilloscope (August '98) I could see it was producing three asyncronous data bytes with seven data bits and odd parity at 1200 bauds.

The *Net Shooter* sells for about £25 and has 29 general purpose buttons, three mouse buttons and a miniature joystick. You also get the receiver that plugs into an RS232 serial port. However, whereas the Risc PC has an RS232 port, earlier computers like the original A310 had an RS432 serial port. There is not too much difference between the two but the RS432 port only delivers signals of +/- 5 volts whereas the RS232 produces +/- 12 volts.

The *Net Shooter*'s receiver uses those voltages to power the detector and there is simply not enough with an RS432 port. Look in your Welcome guide to see what type of serial port your computer has. If it has an RS432 port then you will need the extra hardware shown in Figure I to boost the voltage. If you have an RS232 then you are in luck and can plug the *Net Shooter* straight in.

When I was investigating the signals from the handset I found that I wanted to compare the waveforms from several different buttons. To do this I need an application to merge the data files from several runs so that I could see them all together. To that end I wrote an application to combine traces which I have whimsically called *!Tracy* – it's on the cover disc.

What I found rather puzzling at first was that I got different numbers from the same key. Closer analysis revealed that there were three different numbers for each key and that only some fields of the bit pattern changed for any given key. What is happening is that some bits are used to encode the type of key press, these are: press, repeat and release. Press for the initial key down, then repeat as you hold the key down and finally release as you stopped pressing.

There are areas of the bit pattern that are the same for each of those instances. In fact it turns out there are two, a key code number and the two's complement of that number, you can use this as a sort of check.

Figure II shows the trace for the initial press of the first eight keys. The joystick proved a little more difficult to crack. It too produced different codes but it appeared not to be very consistent at all. All was revealed when I looked at the signal in real time on my Logic Oscilloscope. The joystick is proportional – the harder you push it the more the numbers change.

It turns out that for each direction there are ten different codes, what's more the data is in the form of two's complement numbers that you can simply add to the mouse position. There are three buttons associated with the joystick – Drag, Left and Right. With the drag pushed once, all subsequent joystick codes have the left button bit set until the Drag is pressed again. The left and right buttons send a code when pressed and again when released, no repeats, so you can actually move the joystick while holding down a mouse button. All in all a very intelligent handset.

So let's see how to make use of these signals. The program *IRtest* simply shows the groups of three numbers coming out of the handset whenever a button is pressed. I used this to map out the bit patterns that are shown in Figure III. The first byte gives the key press type, joystick or key. In the case of joystick codes the value of the two mouse buttons are given in this first byte as well. The next two bytes are the data bytes, they give a two's

VCR
EJECT
TV/VCR
DISPLAY
REW
STOP
PLAY
F.F
STILL PAUSE
SHUTTLE
VOL
CH
TV
CABLE

complement (that's positive and negative) number for left/right joystick movement and the final byte for the up/down. There is also a bit in each field that identifies the byte as belonging to a key press type or joystick type. In the case of a key press the data fields are the key's number and the inverse (one's complement) of that code.

The program *IRtest2* takes the bytes from the handset and decodes them into real values that are displayed. You don't actually want to do this very often, what you want is for these control codes to be integrated into the computer's operating system.

I did write a BASIC application to control the mouse from the joystick on the handset, but there was no way I could get it to drag, that is hold down a mouse button while moving the mouse. The only way round was to use a module that intercepted vectors, these are not the easiest of things to write because they are so unforgiving of mistakes.

What we need is quite complex. First of all we need to intercept the bytes arriving at the serial port. These need to be stored until we have received all three. Then they need validating, that is checking that there has not been an error in reception. Then we need to decide if this is a joystick message or a key message. If it is a joystick message the appropriate data bytes need adding to the mouse position.

This involves reading the mouse's unbuffered position, sign extending this 16-bit position to 32-bits, then sign extending the 6-bit joystick increment data byte to a 32-bit number. Adding them together and setting the mouse position to the new value.

As a further complication for our computer we need to invert the up/down numbers, so that part of the data byte has to be negated before we can add it to the position. Next we need to store the state of the mouse button keys for grafting onto the mouse readings later on. As the Acorn has a three-button mouse I have used the key inbetween the left and right mouse buttons as the middle menu button. So, if the module sees a key press it needs to see if it is this menu button, it has a key code of &15. If this is detected then this is added to the mouse button store, otherwise we need to take action on the key that has been pressed.

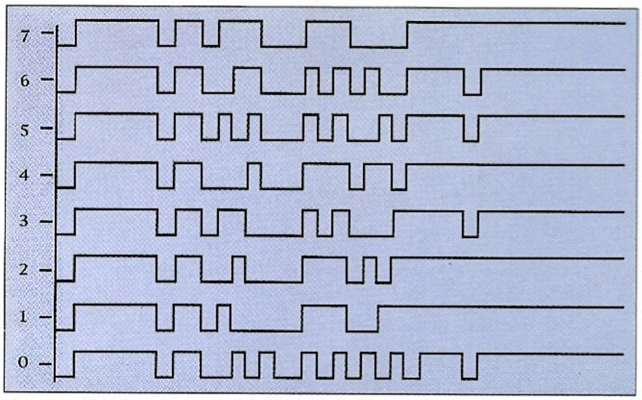


Figure II: The codes for keys 0 to 7

In order to make things a little simpler to customise I have made the module send a message with the key code number in it to a desktop application called *!Shooter*, more of which later. Finally, the module has to add our handset mouse buttons to the real ones every time the computer wants to check up on the mouse's position.

To do this I post claim the MouseV vector, that is get the original routine to do its work and then mangle the results after. In this case the mangling involves adding the handset's mouse buttons to the ones read from the hardware. This post claiming of vectors is a bit complex and the examples in the *Programmer's Reference Manual* won't work with the StrongARM processor. However, by using blank instructions or no-ops my module will work with both types of processor.

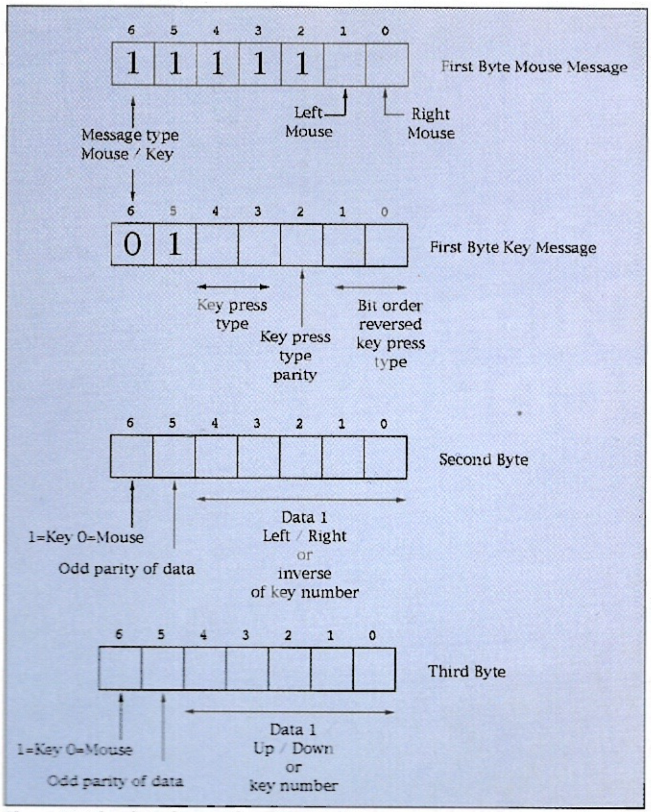


Figure III: The data format from the Net Shooter

Just a small point here, I said I needed to intercept bytes going into the serial buffer, in fact there is no way to do this in RISC OS. I think I have been rather crafty here, there is an event that is generated when there is an error in the reception of serial data. I have set up the computer to use even parity and as the handset produces odd parity, there will be an error generated on each correct byte that is received.

The source code for this relocatable module is supplied on the disc along with a desktop application that ties the whole thing together. This is called *Shooter* and just installs itself on the iconbar – there is no window associated with it. Its main purpose is to load in the module and receive the key code messages from it. Once received it can execute a small routine associated with the key number and these are easily changed to customise the *Net Shooter* for your own purposes. Most of the keys just insert a single character into the keyboard's buffer, however you can insert a whole string or even activate any subroutine. If you look at the *Shooter* program code at the end there are three case structures – one for initial press, repeat key and release key.

You can put in anything here to correspond to the key presses. For the example code most keys simply act as if they had been pressed on the keyboard with the long keys at the bottom of the shooter acting as arrow keys. The V- and V+ rocker key controls the volume of the computer's sound, and the mute button disables the sound altogether. To give you an indication of when the computer is muted a tiny loudspeaker with an arrow through it is drawn underneath the *Shooter* icon on the iconbar.

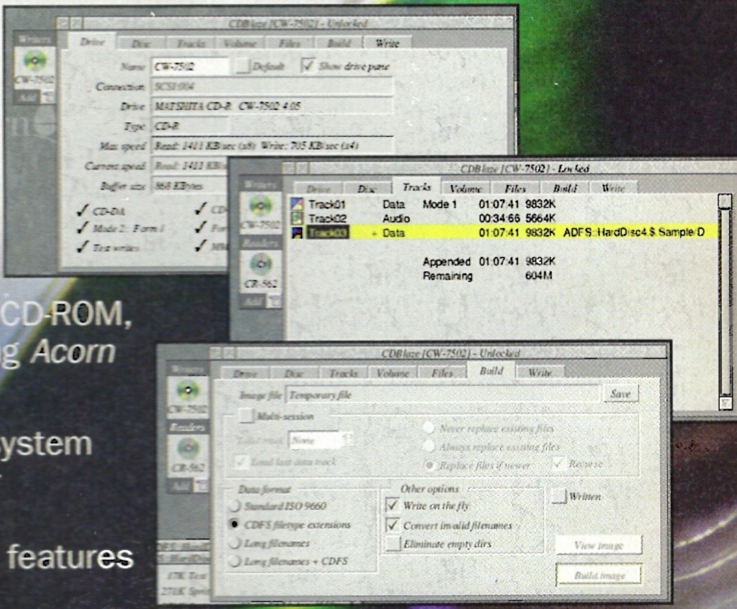
When inserting a string I have found that for some reason *!Edit* misses out every twentieth character inserted into the keyboard buffer when they are inserted at the same time. Therefore if you are going to use this then have strings shorter than this, with *Zap* I had no such difficulty. In order to illustrate the key release message some symbol keys sound notes in a pentatonic scale until they are released.

It is rather nice to be able to sit back and drive your computer from a distance, open the CD draw, drag windows about and play music with my MIDI mouse application. It should also be great for lectures and demonstrations.

Master your own CD-ROMs

SAVE UP TO £40

Save £££s on Cumana's !CDBlaze



Name CW-7502
☐ Default
☑ Show drive pane
Connection SCSI:004
Drive MATSHITA CD-R CW-7502 4.05
Type CD-R
Max speed Read: 1411 KB/sec (x8) Write: 705 KB/sec (x4)
Current speed Read: 1411 KB
Buffer size 868 KBytes
✓ CD-DA
✓ Mode 2: Form 1
✓ Test writes

```
Track01      Data   Mode 1   01:07:41  9832K
Track02      Audio           00:34:66  5664K
Track03    + Data            01:07:41  9832K  ADFS::HardDisc4.$.Sample/D

                  Appended   01:07:41  9832K
                  Remaining            604M
```

Image file Temporary file
☐ Multi-session
Load last data track
○ Never replace existing files
○ Always replace existing files
● Replace files if newer
☑ Recurse
Data format
○ Standard ISO 9660
● CDFS filetype extensions
○ Long filenames
○ Long filenames + CDFS
Other options
☑ Write on the fly
☑ Convert invalid filenames
☐ Eliminate empty dirs
☐ Written

If you feel inspired by this month's cover CD-ROM, why not make your own? Cumana are making *Acorn User* readers an offer you can't refuse...

Cumana's !CDBlaze is a CD mastering system for schools who want to backup data or for musicians to create their own audio discs. Whatever you want to do !CDBlaze has the features you need:

- ★ Writing audio and data tracks
- ★ Full CD-R filing system supporting Audio, Data & Joliet™ discs
- ★ Creation of data discs in native ISO-9660, CDFS and Joliet compatible formats
- ★ Read and write audio tracks as raw-data, Wave or Replay formats
- ★ Create multi-session data discs
- ★ Build 'on-the-fly' images
- ★ Write discs in the background
- ★ CD-RW support

You can try out the software for 30 days by accessing the demo version of the software on this month's cover CD-ROM and there are five different bundles depending on what you need. However, this offer is based on SCSI CDR and CDRW drives and therefore you'll need an appropriate SCSI card which supports CDR/W. Please check with your SCSI card manufacturer before ordering.

OPTION 1
● !CDBlaze Software only for **£80.49**

OPTION 2
● A copy of !CDBlaze with an Internal CDR drive and 10 CDR discs for **£369** – ***SAVE over £12***

OPTION 3
● A copy of !CDBlaze with an External CDR drive and 10 CDR discs at **£428** – ***SAVE nearly £12***

OPTION 4
● A copy of !CDBlaze PLUS an internal Ricoh 6200s CDRW drive for **£369** – ***SAVE £35.78***

OPTION 5
● A copy of !CDBlaze with an external Yamaha CDRW drive costing **£475** – ***SAVE £23.72***

ORDER FORM

Please send me:
☐ copies of Offer 1 at £80.49
☐ copies of Offer 2 at £369
☐ copies of Offer 3 at £428
☐ copies of Offer 4 at £369
☐ copies of Offer 5 at £475

Surname (Mr/Mrs/Ms/Miss) ....
First Name..
Address ....
.... Postcode ....
Telephone .... Date of birth....................

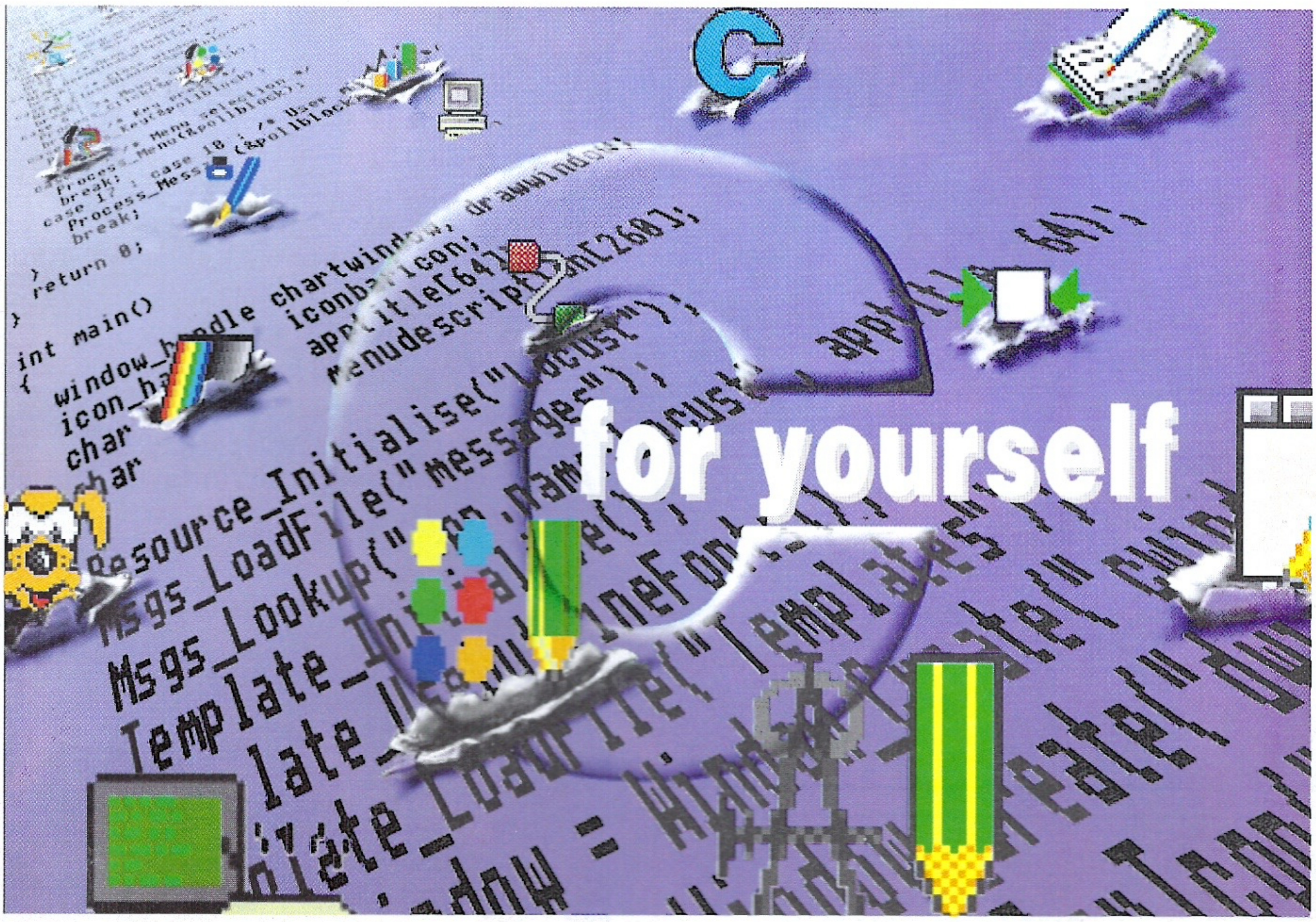
I wish to pay by:
☐ Cheque/postal order made (payable to IDG Media)
☐ Credit card (Visa/Access/BarclayCard/Mastercard)

Card Number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry date ....../...... Signature....................

Send your completed forms to: Cumana CDBlaze Offer, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP

All prices include delivery and VAT for UK only.
Offer ends 30th November 1998
☐ Please tick if you do not wish to receive promotional information from other companies



return 0;
int main()
window_handle chartwindow, drawwindow;
icon_handle iconbaricon;
char apptitle[64];
Resource_Initialise("Locust");
Msgs_LoadFile("messages");
Msgs_Lookup("app.name:
Template_Initialise();
Template_LoadFile("Templates");

C for yourself

JACK KREINDLER

Selecting fonts and choosing colours – **Steve Mumford** looks at the considerations

Last time round I looked at the overall structure our label printing application might take, and we came across certain areas that would require further investigation during the course of coding. These included creating font and colour selection menus, advanced drag and drop code for use in saving files, moving and resizing objects, optimised redrawing routines and direct memory transfer. This month I intend to cover different methods of selecting fonts and colours, as well as revising a little menu theory.

Before we start, let's think about how flexible our selection routines need to be, and check to see how other common programs perform these tasks. Firstly, it's necessary to make an estimate of what sort of demands these tools will be placed under, so that we can design them to provide the maximum amount of use without being overly complicated.

Because we're designing a label application rather than a heavy-duty graphics package, the colours menu can afford to be fairly simple – taking the *Draw* colour picker as an example, its CMYK and HSV options are too complex to be required in our application. However, we must still be able to pick a colour from the entire spectrum, so clicking on an appropriately coloured icon (a technique *Paint* used until the advent of 24-bit colour) will not be enough, and a method of using nudge buttons or slide bars to alter a colour will have to be employed.

The number of fonts installed on a system can vary greatly, so choosing a selection method is quite an interesting task. The accepted technique for most Acorn applications is to produce a hierarchical menu, drop-down or standalone, listing all the major font families with their available weights and styles in sub-menus off the main list. On the PC, it's pretty similar, and even the bloated Microsoft *Word* uses an almost identical method – the main difference is the fact that the most commonly-used fonts are entered in duplicate at the head of the alphabetical list, so that users with more fonts than sense can find their favourites quickly, without having to delve through the rest of the tree.

This is a problem that we might turn our attention to; I'm sure we've all been in the position where we've known just what style of font was required, but couldn't remember the name of it. A method of combining the ease of picking a font from a list with the convenience of previewing the results before applying that selection would save a useful amount of time.

Luckily, RISC OS provides us with two SWI commands that semi-automate the process of scanning the font paths and building the family lists – these are **Font_ListFonts** and **Font_DecodeMenu**. The first SWI serves a double purpose, and is capable of producing a low-level list of the faces known to the Font Manager as well as being able to create a pre-canned menu definition that can be passed straight onto **Wimp_CreateMenu**. The second SWI is used, as its name suggests, to translate a menu selection into a usable font name. Used together, these calls would allow us to provide the traditional style of font selection, as well as giving us the raw data we would require if we wanted to build a more radical selector.

Both the font and colour selection tools could be presented to the user in the form of a dialogue box, automatically created when the user calls up a menu over an object on screen. Dialogue boxes are maintained by the Wimp until another menu option is chosen or the box is explicitly closed; this behaviour is ideal for the tasks we have in mind since the user would then be able to preview the effect of several different options before committing the change to the document.

Using dialogue boxes in this way also means that the selection tools will always remain context-sensitive to the item they're supposed to be operating upon, although the disadvantage is that the operator has to call up a menu whenever he or she wishes to alter the characteristics of an object.

Another way of tackling the problem is to include the font and colour information in a toolbar that's docked with the main window – *ArtWorks* uses this facility to its advantage. Whenever a new object is selected the details are updated, and whenever any change is made in the toolbar, those alterations are applied to the associated object in the document. The main disadvantage of this technique is the amount of space the toolbar eats up in the editing window, especially when each object has many editable parameters. These two methods should cover all of the situations we'll encounter, and will provide a good basis for any more advanced systems we implement in the future. AU

Frak wishes
ACORNUSER
a Happy 200th
Birthday

Frak is priced at £15 and available at all good dealers.

PRINTMAKER
http://printmaker.co.uk

ACORN
FRIENDLY
SCREEN PRINTER
& VINYL GRAPHICS
BUREAU

Contact Chris Mercier
14-16 Eldon Terrace
Reading Berkshire
RG1 4DX
printmaker@argonet.co.uk
0118 956 7947

WITHDRAWN
If an ad misleads, we're here to stamp it out.
Advertising Standards Authority
2 Torrington Place London WC1E 7HW 0171 580 5555 http://www.asa.org.uk
ASA

NEW!
TOUCHPAD
For use with PS2Mouse, PS2Mouse+ or directly on A7000 series machines. Supports "tap-clicks". Supplied complete with stylus and wristpad.
£34.95 Alone
£29.95 With PS2Mouse/PS2Mouse+

PCJoy Use Analogue joysticks on your Acorn machine. £39.95
Solo Interface for Atari-style joysticks £14.95
Printer switch boxes inc cable £17.95
Obsolete Drivers Disk for old joysticks/joypads £7.95
Light Aircraft Sim. *THE* simulator for Acorn PC card £69.95
PS2Mouse Allows the use of any PS/2 mouse (6 pin connector) on an Acorn machine, including trackballs and remote control devices!
PS2Mouse+ includes through port and jacks for switch inputs.
£24.95 PS2Mouse
£39.95 PS2Mouse+

Just a selection from our range of Game, Interface and Access products.

Phone, write or email for a free product information flyer!

STD
Stuart Tyrrell Developments
Stuart Tyrrell Developments
PO Box 183, Oldham OL2 8FB
Orange: 0976 255 256 (9am-9pm)
Info@STDevel.demon.co.uk http://www.stdevel.demon.co.uk
All prices include P&P. All trademarks acknowleged. E&OE.
Access/Visa/Delta/Mastercard accepted.

Award-winning Acorn/Windows
EDUCATIONAL SOFTWARE
Pre-school, Primary, Lower Secondary
Special Needs & the Home
BETT
GOLD BETT 95, Silver BETT 94

'Speaking for Myself', 'MathMania', 'MathsBook', 'MusicBox'....
FREE CATALOGUE available by mail, or visit our Web site.
All products available to schools on 30 days approval.
FREE DEMO DISCS for home users - please state title(s).

TOPOLOGIKA SOFTWARE
Topologika Software
Waterside House, Penryn, Cornwall TR10 8BE
tel 01326 377771 fax 01326 376755
email sales@topolgka.demon.co.uk
Internet http://www.topolgka.demon.co.uk

CD-ROM Mastering
Memory
Graphics Tablets
Speakers
CD-ROM Towers
SCSI Cards
CD-Recorders
Sound Cards
Hard Drives
CD-ROM Drives
PD-Drives
DVD-RAM Drives
Monitors
CD-ROM Software

New DVD RAM 5.2Gbyte

Ask for a demonstration at the Acorn World Show: Stand 181

eesox
Email:sales@eesox.demon.co.uk
http://www.eesox.demon.co.uk
Telephone : (01954) 208208
Century House, 1st Floor, Market Street,
Swavesey, Cambridgeshire CB4 5QG

OVER ONE GIGABYTE!!

Our P.D. Catalogue disc free with every order

Only cheques or postal orders accepted

FIVE STAR MARKETING
History Geography Planets Fonts Clipart Sport Languages Flags Utilities Programs Religion Chemistry Maths Science Art Essays Maps
ONLY £ 25 - 75
Educational CD Rom

Stimulate your mind - Test your scientific knowledge
Learn about your solar system - Speak new languages
Thousands of high quality clipart - Geography tests
How good is your maths? - Discover various religions
Maps of the world - Bringing up and educating your child

Five Star Marketing, 4 Shepherds Walk
Bushey, Herts. WD2 1LZ.

Sales Hotline: 0990 329070

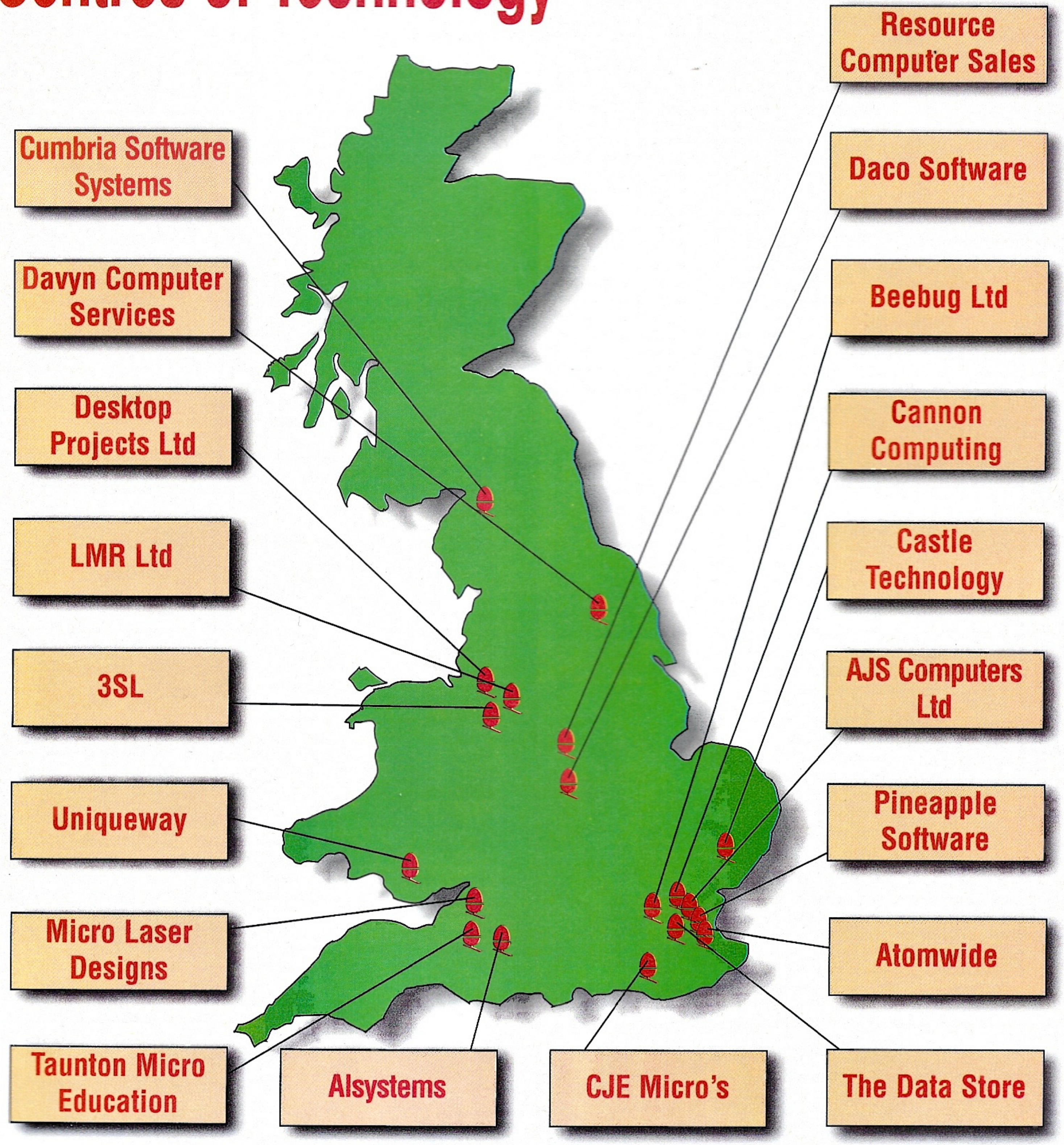
Acorn

Customer Support: 0990 168790

Acorn World '98: 01223 725297

WWW: http://www.acorn.com

Centres of Technology


Cumbria Software Systems
Davyn Computer Services
Desktop Projects Ltd
LMR Ltd
3SL
Uniqueway
Micro Laser Designs
Taunton Micro Education
Resource Computer Sales
Daco Software
Beebug Ltd
Cannon Computing
Castle Technology
AJS Computers Ltd
Pineapple Software
Atomwide
Alsystems
CJE Micro's
The Data Store

Ramb

Ac
Wo

Another question
with **M**

I have been working on a new website this month, it's for my music fanzine. In fact Alec has been doing most of the work, if you want to check it out it's at http://www.deathsdoor.co/thisisnottv

A lot of questions I get concern hardware upgrades, especially to old computers. This is sometimes difficult to cope with because the availability of hardware components is constantly fluctuating. Therefore I was pleased to see that IFEL (01752-777106) have produced a comprehensive list outlining most models of Acorn RISC computers and what can be done with them. So, if you are in the market for an upgrade but don't know where to turn then give them a call.

It seems that the AM399C organiser I used in a recent project (May & June '98) is coming down in price, and that they are throwing in a PC data link, which makes my infrared system a little obsolete. The data link looks like one of those slim card modems but is actually a voltage converter to change the small signals from the organiser into the large ones needed to drive the RS232 port.

However, there are a few small modifications that need to be made to my application to make this work with a straight serial system. I am indebted to David Hankey from Burton-Upon-Trent for investigating this and supplying a modified version of the application, it's mainly a matter of changing the handshaking protocols. He also notes that he experiences trouble uploading telephone records where there are missing fields and he is just uploading one record. The workaround is to either upload the whole telephone section or fill out all the records in an entry.

Another slightly puzzling problem he has is that he says that the application won't run unless you set the computer to a 256 colour mode. However, I can't reproduce that fault on either my StrongARM Risc PC or my original A310. Is any other reader experiencing that problem?

R G Steane from Guildford also told me about the organiser but was not keen on using the PC link. He had some other questions as well:

I am not too keen to mess about much with the sockets at the back of my Risc PC 600 as I sometimes get an odd situation arising after any fiddling (inside or outside). What happens is the computer does not boot correctly – the HD light comes on, then switches off after say 30 seconds instead of about 20 seconds but there is no screen display or further activity, and crucially no pulse of activity from the floppy drive.

If I push down on the chips or motherboard in the back left hand side, it usually reboots more reliably. Could this be a problem with the motherboard or with the OS chips (I have added OS 3.6 from another computer, now unsuccessfully upgraded to StrongARM)?

Incidentally, I notice that your application's icon takes over and replaces the usual one displayed by the other organiser program in the filer display. Why does this happen? Finally, sometimes when double-clicked from a filer display, applications open a directory window for their component programs as if shift was held down at the same time; usually a second double-clicking installs them onto the iconbar as expected. Why is this?

Sounds like your computer has a loose connection or unsoldered joint – you should get it looked at by a service engineer. If two applications have the same name the last one seen by the finder will be used when redrawing the icons. Note they are not redrawn straight away but only when covered up and revealed. If you want to stop this happening rename one application, then shift click it and open up the sprites file, rename the two sprites "!oldname" and "sm!oldname" to "!newname" and "sm!newname".

Save the sprite file and double-click the !boot file in the application or run it and the new icon will appear on the desktop. Unfortunately the latest icon will still appear on the iconbar. To stop that happening you will have to edit the application. It's fairly easy if it's in BASIC. Search for the old application name and replace it with the new one. If it is compiled or in C then tough.

As to the problem with applications that sometimes, when double-clicked, open up a filer display, or sometimes run. What is in the application's !RUN file decides what happens when it is double-clicked. It sounds like there might be certain actions to load modules or look inside the application when first clicked programmed into the !RUN file. These might have been left over from the development phase, you can always edit it if you want.

Next Tom Hatrick has a musical problem:

A colleague of mine has posed a teaser. He is a musician and was given an old organ pedal board from a pneumatic organ. He wants to somehow use the pedal board to drive a MIDI device so that he can hear what he is practising better than the dull thuds at present.

Do you think it is possible to arrange some kind of switch assembly on the board linked to a PCB to convert the switching into MIDI data? It doesn't have to be too complex, velocity, aftertouch, etc. simply note on and off, the same as the original organ would have done! Any ideas/suggestions gratefully accepted.

Well it is a small world. My son Alec had a similar problem only his was with an electric organ and he wanted to use the bass pedals as a MIDI drone system for his electric guitar playing. Your main problem here is converting the pneumatic key pressings into electrical signals, pressure sensors tend to be quite expensive – usually between £60 and £160 each.

There is a low cost pressure switch that would do the job, but even this is £17 from Farnell (order code 731-912) so if you put one of those on each pedal it is quite an expensive job. A better solution might be to fix a small magnet on the end of each pedal and have a reed switch mounted underneath so that it closes when the pedal is pressed.

Another idea is to use an opto slot detector under each pedal and have a small vane attached to each pedal. Anyway, once you have an electrical signal you need to get it into the computer, decode it and send out the MIDI commands. For this you will need a MIDI interface and some sort of input expander – when helping Alec I used the PUPe expander published in the October '95 issue. Then all you need is the software which is on this month's cover disc. If you want to have a unit that is independent of the computer then you can use a PIC controller chip to read in the switches and convert them into MIDI data.

Steve Harratt is having a bit of bother finishing off my oscilloscope project:

I have just about completed the oscilloscope project, however I am having difficulty finding a +5v on the printer port. Can you tell me which pin to connect to, or do I have to use a battery?

There is no printer port pin with this on it (unlike the old user port), that's why you can't find one. Also you can't get a 5 volt battery, the power to logic circuits must be within a quarter of a volt of 5 volts. I have tapped 5 volts from inside the computer from pin 32a of the podule connector and got 0 volts from pin 1a. I have brought these out to a socket on a disused podule panel.

Another alternative is the keyboard connector, pin 4 has 5 volts on it with pin 3 having zero volts. You can make a small box with a printer extension lead to tap this off. Similarly the mouse socket carries 5 volts on pin 6 with zero volts on pin 4. Of the two the keyboard connector has fewer pins and so is less fiddley to mess about with. Otherwise you will have to use an external regulated supply.

Richard Harker has been having a look around my website but he has not found what he's looking for:

I was looking at your past articles on your website but unfortunately, there wasn't anything there that I was looking for. Would you consider covering an interface to control a Lego robot, or model railway in your 'Run the Risc' series? The sort of interface that I would like is something with about eight outputs and four inputs. The interface could be complete with an integral power supply, so you literally just had to connect the motors (or whatever) and go, with no need for batteries.

If it had an integral PSU, then a switch to switch between some various voltages would also allow it to be used with different things, for example railway are 12v, Lego is 3.5v (old) and 9v (new). Also, being able to reverse the polarity of each output individually would be very useful as well.

Yes this sounds like a good idea, the problem is that all those topics have already been covered.

es through
orn
ood

d answer session

e Cook

It's just a matter of piecing together the relevant projects to have exactly what you need. Let's start with the I/O 8 outputs and 4 inputs can be met with the IIC bus (that's pronounced "Eye squared sea") interface. This give eight digital input/outputs along with four analogue inputs and one analogue output.

There is nothing stopping you from using the analogue inputs as digital inputs you know. That was published in the December '95 *Acorn User*. However, there are several alternatives for your I/O. The serial I/O board in February '97 is an interface to give you 16 bits of any combination of input or outputs using the serial port. Now on to motor control, in April '91 I showed how to control motors in by Body Build articles in *The Micro User*. This chip allowed the switching of motors on and off, but also could be wired up such that the polarity could be reversed so that the direction of the motor could be controlled.

In this mode it was also possible to employ fly wheel breaking to stop a motor more quickly. This used the LM18293 push pull driver chip that also made an appearance in the '96 Christmas special issue. The point about these chips is that they have a separate power supply pin for the logic and motor supply so you can connect that to anything. You can get a low cost motor supply from Maplins that allows you to change the voltage. All you need to do is piece that lot together in a box and you have exactly what you want.

Reginald Whitlock has been building one of my old projects, but hit a snag:
I have built the printer port converter described in *Acorn User* September 1995 in order to use an add-on that was designed for the modern printer ports, on which it works fine, but on my ARC 310 with the converter it refuses to work correctly. On looking more closely at the diagrams in the magazine I noticed that there is a difference between the block diagram (Figure II) to the circuit diagram (Figure III), in that in the Block Diagram the BUSY line goes to the Status Inputs multiplexer, and the ACK line goes to the I/O port multiplexer, whereas in the circuit diagram pin 10 which is ACK goes to the Status Inputs multiplexer and pin 11 which is BUSY goes to the I/O multiplexer! Which is correct?

It is the circuit diagram that is correct, if you have wired it up like this then it should work. Sorry about the error in the block diagram and any confusion it might have caused.

Mike Buckingham has ambitions for high resolution high speed analogue capture on the cheap:
I need an 18-bit audio sampler, digital input/output. No one makes one, at least not for the Risc PC. Could it be done as a DIY project? Analogue Devices make the AD 1878 which gives a serial output and looks relatively easy to wire up as a simple audio in/serial out device. I might even be able to do this myself.

While I could probably struggle to write some BASIC, I couldn't cope with ARM machine code. Even worse, the intricacies of the back plane are, I think, getting too complicated. DMI also seems to run into problems with SCSI cards grabbing too much time. So, could the parallel port cope? I presume the signal is around the 2M bits/sec mark. And if so, would it be a simple job to write the code to:

- **Take SPDIF signals and spool them to a file as .wav**
- **Take the serial o/p from the 1878 and spool that to a file**
- **Take a .wav file and spool it out as SPDIF for an external DAC**

If this is viable, are there any mad coders out there who'd be interested in such a project?

Quite frankly – no. Access to the parallel port through the legal calls takes about 2us, this gives you a rate of .5Mbits/second. Accessing the port directly is not easy with a StrongARM or cached system, so the only option is to go through a podule. Design of this requires a four layer PCB for reliability and so is not a DIY option.

Also with 18 bits and say a 5 volt full scale voltage you have just under 20uV per step. This is very small and your analogue circuitry has to have noise and pickup at less that this level which is not a very DIY thing. The .wav file format is normally for 16-bit samples, if you start throwing 18-bit samples at most wav players they might throw a wobbly. There are some PCI audio cards that will meet this specifications at about the £800 level but then you will need a Phoebe and some driving software.

James Sargent has been having fun with photographs:
I am currently trying to create a website based on photographs from a recent holiday. The problem arises in that I took a number of "panorama" pictures by taking a photograph, moving the camera around and taking a second photograph (hopefully) with an overlapping area common to the two images. It certainly isn't practical to try to manually position the photographs on the scanner as they never quite line up, so the question is how can I join two (or more) scanned images together in software?

Making photographic panoramas is quite fun and does attempt to capture a little more of what it was like to be there, I have done this many times and stuck them down in a picture book. However with electronic cameras and scanners you can join them up a little more convincingly.

You can use several pieces of software for this, but the cheapest is *!Paint* as you already have it. Get the two photos as sprites in the same file, then add extra columns and a few rows to one of them. Then use the "sprite as a brush" option and add the two together.

Other commercial software will also allow you to do this sort of thing such as *PhotoDesk* from Spacetech. With this you will also be able to smudge the join a little as well as applying the colour correction that will inevitably be needed because the two photographs will have slightly different lighting conditions.

However, you will find that you won't be able to make a perfect join for the whole length of the seam, this is due to the geometrical distortions involved in the original photographic system. I am sure you have seen those fish eye lens photographs where horizontal lines become curved. Well this effect is in all photographs taken with a lens, it's just not so pronounced with narrower angle lenses, but it is there.

If you try to match up two vertical lines it will be rather like trying to match up two bananas. The real answer is to use some sort of ratiometric correction. This is like putting your image on a rubber sheet and stretching it slightly in different directions until it fits. As far as I know there is nothing on Acorn machines that will do this, the software on the Mac that does this is very expensive. It is used on the Mac to make 360 degree panoramas for the *QuickTime* virtual reality movies. These can be viewed on the Risc PC by using *VRview* from WSS.

If you do have access to a Mac then on the cover CD of the June '98 *MacWorld* (another great IDG publication) there is a free copy of *Spin Panorama* 1.0 which will do this sort of thing semi-automatically, of course they are only trying to sell you version 2.0.

Ben Langridge has been setting up on the Internet:
I have recently set up an Acorn devoted site (using my PC), and have included a chat page as part of the site. It's a Parachat room (and is currently not working). I have not been able to find much information about it, other than its 100 per cent Java. Do you have any idea as to whether it would work on an Acorn computer? If you wanna take a look at my site try http://www.btinternet.com/~langridge/theacornpages

I assume that you have set this up on some remote server and you want to access it through your Acorn computer. If this is the case you need the Acorn Java CD, even then you should check if the version of Java that you chat application is written in is compatible with Acorn's system. There should be a comment in the first part of the code. Use a text editor like *Zap* to have a look at it.

The other thing to watch out for in Java is that your application is not written using some of the Microsoft unauthorised extensions. The other place problems are likely to hide is with the interface to the outside world with the likes of ports and pipes. Without further details I can't be more specific. Has any reader implemented something like this?

Finally, from P Townend there is this:
Is it possible to disable the F12 key from the pinboard and to reinstate it with a password.

I am sure there must be a utility to do this sort of thing but I don't know of any off hand. Can any reader point me in the right direction?

The world of fonts is about to change...

Professional Typography Expert 2100

NDT™ No Dropout Technology

The Font CD

Special offer *Bring your copy of Typograhy 1 to Acorn World & upgrade for only £10.00!*

Reviewers comments about Typography volume 1

"...value for money...the NDT idea really does do what it claims..."
Richard Hallas Acorn Publisher

"...NDT fonts are even better...the difference is quite noticeable..."
Geoff Preston Acorn User Feb 97

"...very convenient...something for all dtp users."
David Littlejohn Acorn Publisher

"...good quality fonts...excellent value for money..."
Mike Williams Arc World Vol 14 Issue 4

"...brilliant...very attractive indeed.
Acorn User May 1997

"...NDT as used by iSV produces superior results."
Acorn Publisher

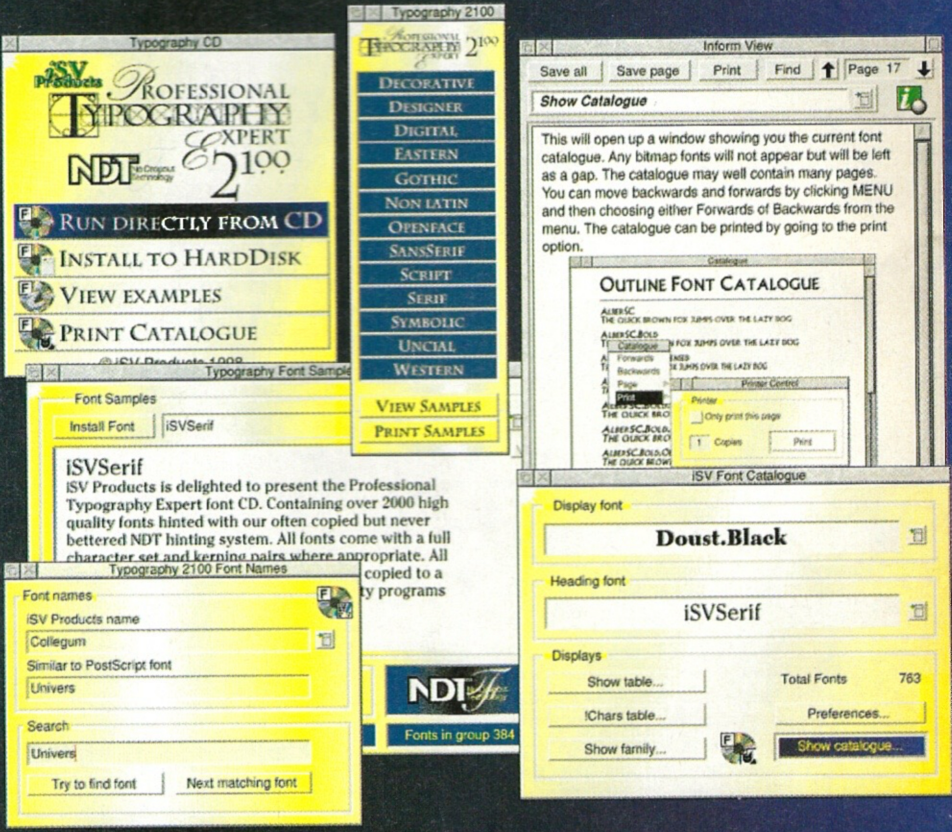
"...high quality fonts...excellent value"
Computer Shopper Sept 1997

"...reproduce better than any other budget fonts that I have seen..."
Richard Hallas Acorn Publisher

"...NDT fonts will improve your print quality no end...very carefully hinted and scaffolded so that they will appear clearer than ever before."
Acorn User

Professional Typography Expert 2100 is even better...

- *Over 2100 high quality fonts, the largest commercial font package for Risc OS.*
- *Includes all the Typography fonts plus over 740 NEW faces.*
- *FREE copy of Font Designers Toolkit.*
- *FREE copy of FontTrix Pro.*
- *All fonts fully hinted using NDT 4, the latest version of our hinting system.*
- *All fonts have a full Latin 1 character set and kerning pairs.*
- *Our pioneering system that allows fonts to be used directly from the CD.*
- *Install into EasyFont, FontDIR or !Fonts folders.*
- *NEW allows single faces to be installed to your hard disk.*
- *NEW improved font sample system.*
- *Complete font families, not just single weights.*
- *NEW iDesigner application, not sure which fonts to use, ask iDesigner.*
- *NEW list of PostScript™ font names.*
- *Supplied with comprehensive illustrated on-line manuals.*
- *Requires Risc OS 3.1 or later, 2Mb RAM & CD-Rom drive.*


Typography CD
iSV Products
Professional Typography Expert 2100
NDT No Dropout Technology
Run directly from CD
Install to HardDisk
View examples
Print Catalogue
Typography 2100
Decorative
Designer
Digital
Eastern
Gothic
Non latin
Openface
SansSerif
Script
Serif
Symbolic
Uncial
Western
View Samples
Print Samples
Inform View
Save all
Save page
Print
Find
Page 17
Show Catalogue
Catalogue
Outline Font Catalogue
Forwards
Backwards
Page
Print
Printer Control
Printer
Only print this page
Copies
Typography Font Samples
Font Samples
Install Font
Typography 2100 Font Names
Font names
Search
Try to find font
Next matching font
Fonts in group 384
iSV Font Catalogue
Display font
Heading font
Displays
Show table...
!Chars table...
Show family...
Preferences...
Show catalogue...

This will open up a window showing you the current font catalogue. Any bitmap fonts will not appear but will be left as a gap. The catalogue may well contain many pages. You can move backwards and forwards by clicking MENU and then choosing either Forwards of Backwards from the menu. The catalogue can be printed by going to the print option.

iSVSerif
iSV Products is delighted to present the Professional Typography Expert font CD. Containing over 2000 high quality fonts hinted with our often copied but never bettered NDT hinting system. All fonts come with a full character set and kerning pairs where appropriate. All
copied to a
ty programs

iSV Products name: Collegum
Similar to PostScript font: Univers
Search: Univers

Display font: Doust.Black
Heading font: iSVSerif
Total Fonts 763

Typography 2100, normal rrp £31.50, upgrade from Typography 1 £16.50

All quoted prices (unless stated) are for single users versions only. Special offers relate to single user versions only.

Overseas orders please add £2.00 carriage

All details correct at the time of going to press E&OE
NDT & Typography are trademarks of iSV Products. All other trademarks are acknowledged
This advert was produced using NDT fonts stored on the Typograhy CD & DrawWorks

iSV Products

iSV Products
86 Turnberry • Home Farm
Bracknell • Berks • RG12 8ZH
Tel 01344 455769
http://members.aol.com/isvproduct/

Write to Acorn User, Media House, Adlington Park, Macclesfield, SK10 4NP. E-mail: auletters@idg.co.uk

LETTERS

All in the name

I was amused to read in the Clan newsletter that the hardware boards fo the Risc PC II were named after characters from the American TV series *Friends* because the development team were fans. Presumably there are bits of computer called Monica, Ross, Joey, Chandler, Rachel and the rest.

I couldn't help remembering however, that the page of memory in BBC computers for memory mapped hardware was called Sheila and the two pages for the 1MHz bus were called Fred and Jim. Maybe Fred, Jim and Shelia were characters in an early '80s TV series. Can anyone shed any light on the origin of these names?

Chris Bazley
C.Bazley@Pemail.net

An interesting idea ... but no. Fred has a special significance to programmers as it's a name that can be typed with the left hand just zipping round a little square. Likewise Jim is easily typed by the touch-typingly-challenged on the right.

Sheila may have been an attempt at redressing the balance of the sexes. Of course I could be completely wrong.

Yellow praise

I was pleased to see Richard Murray's letter (October '98), with his warm memories of the AU Yellow Pages. I spent countless hours entering these programs line by line into my old Electron. Never has there been a better learning tool for BASIC programming, each time I entered a program I learnt a new keyword, or a new programming trick. You start to see inside the programmers mind, and develop a good mindset for writing your own programs. The necessary de-bugging to correct typing mistakes was also a valuable learning tool.

I was very saddened by your response to Mr Murray's letter, which was a harsh and heartless rebuff to consider the return of anything like the Yellow Pages. I am fully aware of the space that would be wasted by printing the source of all programs in the magazine, and the fact that so many more programs now include sprites and sound, or other datafiles, which would be necessary for the program to work, and I agree that discs are here to stay.

However, since so many of your faithful readers have benefited from the Yellow Pages, and since your programming features always include examples of code you are clearly aware of this as a learning technique. For the beginner programmer, or to teach new techniques I can think of nothing better than having a "Yellow Page".

Whatever they were to you, the Yellow Pages were a much appreciated and powerful learning tool to countless BASIC programmers.

Richard Adams
r.adams@flipside.co.uk ➤

Ex-source-ted

Justin Fletcher (August 1998 issue) is right. There are very few situations where it is not worthwhile to release source code with a free program. Not only does it allow others to learn from your code (emphasised in the October Letters page), but more importantly it allows others to improve software.

Whole operating systems have been built – and thrive – on this premise, notably GNU/Linux and FreeBSD. And surprisingly, this mode of development does not result in anarchy, as explained by Eric Raymond in *The Cathedral and the Bazaar* (http://locke.ccil.org/~esr/writings/cathedral.html).

Richard Murray (October 1998 issue) points out that when people make deficient modifications to a program, it can cause problems. But anyone can hack an executable and cause it to crash – however, when source is provided, changes can then be made on much safer ground. If a programmer is worried about his reputation being damaged by other people's changes to their program, it is a simple matter to ensure that the program's licence requires modifications to be clearly shown.

More importantly, treating your users as valued co-developers often means they become valuable co-developers. It is true that some authors will provide source code on request. But it is better that source code be publicly available – if the author disappeared, your favourite program could become unmaintainable. For example, I recently ported a Unix program to RISC OS: the source was available, so I could start right away, and I will soon send patches to the author. But the source for the previous port was not available, so I had to port it from scratch.

Now I want to improve upon an existing RISC OS program but the source is not available, and the author has not replied, so I am stuck. Commercial software companies can also benefit from making their software Open Source (the Open Source movement, incidentally, has a home page at http://www.opensource.org/

In a letter, Peter McCaskill (October 1998 issue) points out that Acorn's *Draw* "could do with a make-over", to which a reply came that it requires "vast amounts of money". It does not. It only requires Acorn to release *Draw's* source code, and a large number of capable programmers will collaborate to improve it. After all, software such as *Draw* and the Toolbox are not Acorn's key products – it does not benefit Acorn or anyone else for Acorn to hoard them.

Netscape have already accepted this argument and released the source to Netscape Navigator, aiming to profit from the server side of their business. The number of businesses embracing Open Source can be appreciated by reading the comp.os.linux.announce newsgroup.

Unfortunately, there seems little chance of Acorn adopting this attitude. The company's higher echelons now seem to consist of 'suits' who cannot understand such arguments. This is embodied by Acorn's refusal to release its RISC_OSLib for free (now considered by Acorn to be obsolete; but it is still useful), because they could not provide support for it – a spurious reason, since no support would be expected for a free product.

It is time for the Acorn community, and Acorn, to welcome Open Source software and reap its benefits – or continue the gradual descent further into obscurity.

Mark Seaborn
mseaborn@argonet.co.uk

LETTERS

Top tips

Having read all the latest about the Phoebe, it seems that all you're really be getting for your one and a half grand is a slightly updated version of RISC OS which gives longer file names and a few other bits and pieces. I am very happy with my StrongARM Risc PC, it does all I need apart from the painfully slow PC card.

I feel that RISC OS is badly in need of an overhaul, and needs to look at the best parts of Mac OS and Windows 98 and maybe take some tips from them. I don't see the Phoebe as a revolution, like the Risc PC as a leader in the computer market, it is more like an attempt to keep up with the rest. I had hoped for better.

However I would like to know to what extent will my computer be upgradeable?

John Kitson
xjr22@dial.pipex.com

By now you will know about the amazing money-off deals that Acorn are now offering (full details in the News) so perhaps you see things a little different.

It may be fair to say that Acorn have spent most of their efforts on the hardware and the core software that interacts with the new hardware. Obviously they have to put their priorities somewhere. But the user interface changes are not inconsiderable.

If you want to know what parts of RISC OS 4 will reach the older machines, that's a little trickier. You will certainly get the new !Printers with its photo-real support, you might get the filecore upgrade (long filenames and big directories) but that's much less likely.

Just a thought

Just out of interest has anyone (from Acorn to Acorn User/IDG Media) ever tried inviting a major political figure such as the PM to the Acorn Show?

And why doesn't Acorn send the first Phoebe to the Blairs' kids? (Or would this be seen as some sort of 'bribe'?)

Richard S
richards@mossoft.demon.co.uk

Feel good

I note from recent *Acorn User* issues that the unending Acorn inferiority complex is as healthy and vigorous as ever. Looking through back issues of the magazine, it seems that the level of complaints about Acorn not doing enough/spending enough, ignoring key users and so forth are at about the same level as they always have been. Why not compress all those letters into a simple, graphical *Acorn User* Reader Contentment Index and be done with the whole thing?

Working in the PC industry as I do, I get to see the Wintel side of matters as well. My company recently bought a consignment of forty high-range PCs – 400MHz, 7.5Gb HD, 128Mb RAM etc. These will be considered impressive systems for about three to six months, but soon thereafter they will be viewed as distinctly average. Inside two years, people will start sneering at them for being wimpy and underpowered.

On the other hand Acorns get sneered at from day one, but PC-using critics seem to shut up at about the 18-month stage. I was gobsmacked to realise my own Risc PC is more than two years old – because there's nothing I want it to do that it can't. No current piece of Acorn software (that I'm interested in using) that it can't handle with aplomb.

Three years ago, my company was buying in DX2-50 PCs. What use is one of those nowadays? My advice to anyone buying a computer is: 'Acorns for longevity, PCs for games'. I suppose the best of both worlds would be a PC running some flavour of Unix, but that's a solution only for 'techie types' Anybody care to take issue with that?

Simon Smith
Whitton, Twinkenham

Network blues

I am an IT tutor in a primary school where I run a computer suite network of ten disc-less Acorn A7000s with a Risc PC 700 server.

It has worked extremely well for the past two years with minimal attention and expense and we are pleased with the results. The accent is on getting children to use the computer as a practical creative tool rather than a teaching machine.

We would now like to network the school's 20 classrooms to a second Risc PC 700 server, replacing their present assorted standalone A3000s, A3020s and A4000s with more modern Acorn equipment at the same time.

This final move has been delayed because I had hopes that the Acorn NetStation could be an ideal solution for us, allowing us to stretch a limited IT budget to maximum effect. I have since been informed that the NetStation cannot be run direct from an existing Risc PC 700 file server because the software is "unstable" although the comment was made that it could probably be "tweaked" (whatever that means) so that it would do the job. I was told that I would need a UNIX server controlled by the Risc PC to run a classroom network of 20 NetStations. Our school has no wish to access the Windows environment at present as Acorn software is proving more than capable of meeting all of our curriculum requirements.

All we want is a simple, reliable low-cost network with "bulletproof" dumb terminals in the classrooms. Is there any likelihood that a Risc PC/NetStation combination will be able to deliver this?

I also have a Risc PC 700 at home and I had visions of installing a network card and putting a NetStation in my teenage daughter's room to stop her monopolising my workstation. Can I kiss this idea goodbye too, or is there still hope for a cheap solution?

Mark French, Rotorua
New Zealand

Acorn have been working on a system for booting NCs from RISC OS, which is why they have unstable software that needs to be tweaked. Perhaps they'll make it bulletproof soon.

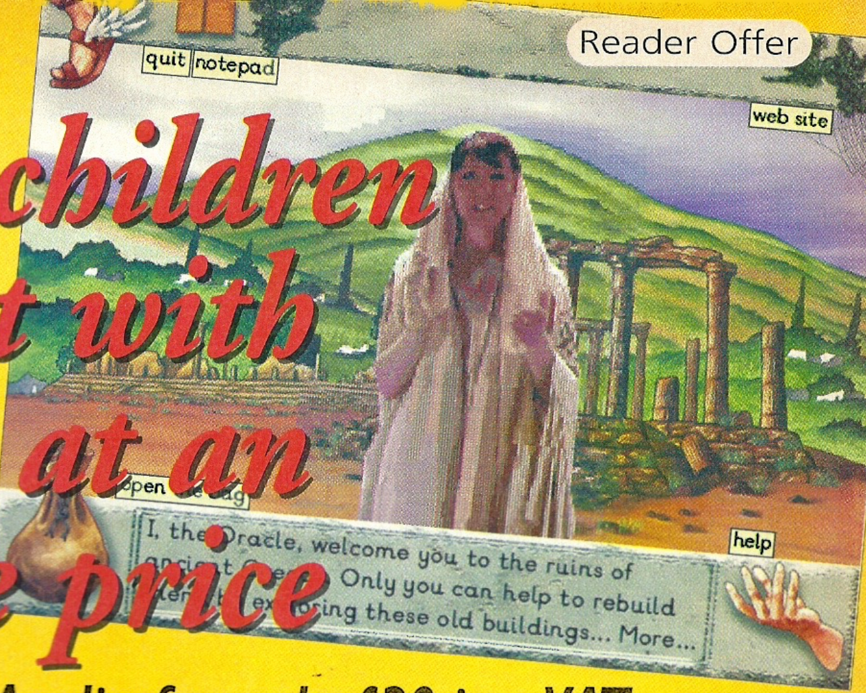
Air your views

If there's something you want to 'get off your chest' or you have some interesting information for your fellow *Acorn User* readers, then write in to:

Letters page, Acorn User, Media House,
Adlington Park, Macclesfield, SK10 4NP
or e-mail: auletters@idg.co.uk

Please note that we do not guarantee a personal reply to letters.

Reader Offer

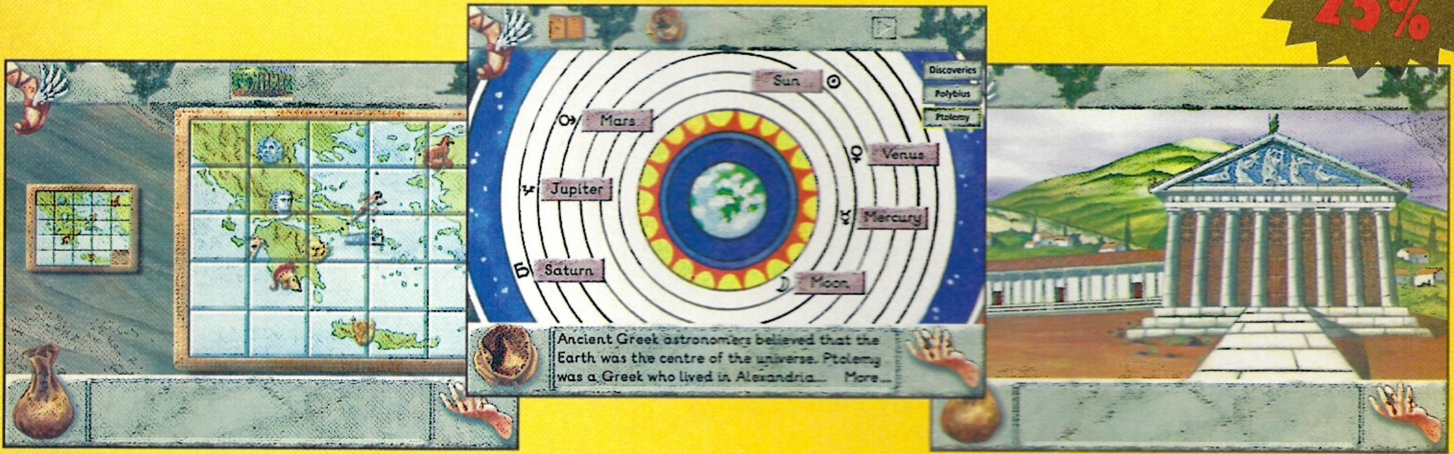


I, the Oracle, welcome you to the ruins of ancient Greece. Only you can help to rebuild them by exploring these old buildings... More...

Give your children a headstart with the Greeks at an unbeatable price

Get Ancient Greeks from Anglia for only £30 inc. VAT with this fantastic reader offer from Acorn User

SAVE 25%



Ancient Greek astronomers believed that the Earth was the centre of the universe. Ptolemy was a Greek who lived in Alexandria... More...

Ancient Greeks is an engaging introduction to the history of Greece and its importance in World History. From the moment the Oracle appears and implores you to restore her ruined city you are drawn into a series of exciting activities. The city can only be rebuilt if tasks are completed in each of the ruined buildings.

Ancient Greeks is an entertaining and enjoyable way for your child to learn while developing key skills. The interactive activities are designed to provide information about ancient Greece as well as encouraging the development of information gathering and processing skills. Plus key elements of the History curriculum are addressed including interpretation, organisation and communication.

Getting hold of your copy of Ancient Greeks couldn't be easier, simply fill in the coupon below and send it complete with payment (including £1.99 postage and packaging) to: **Ancient Greeks Offer, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP**

YES! Please send me a copy of **Anglia's Ancient Greeks** for only **£30** inc VAT plus £1.99 P&P

Surname (Mr/Mrs/Ms/Miss) ....

First Name..

Address ....

.... Postcode ....

Telephone .... Date of birth ....

I wish to pay by:

☐ Cheque/postal order made (payable to IDG Media)

☐ Credit card (Visa/Access/BarclayCard/Mastercard)

Card Number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry date ....../...... Signature........................

Send your completed forms to: Ancient Greeks Offer, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP

☐ Please tick if you do not wish to receive promotional information from other companies

Amazing free gifts and special offers!!!

Over £100 worth of magazines and software for just £39.99

ACORN USER

the world's number 1 Acorn magazine

CURRENT SUBSCRIBERS
– you can take advantage of these offers by renewing your subscription at any time

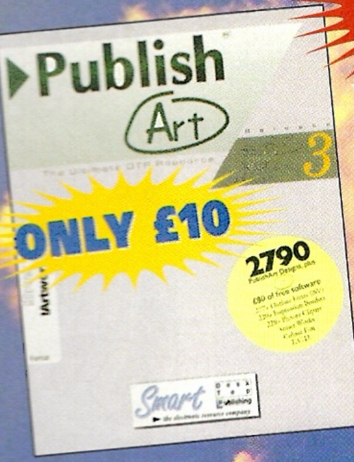
You already know what a great magazine ACORN USER is. It is the only Acorn magazine with up-to-the-minute Acorn news, in-depth hardware and software reviews, and without doubt the best cover discs available.

What you might not know is that by taking out a subscription today, not only are you guaranteed never to miss an issue of the biggest and best Acorn magazine in the world, but you can also claim an excellent free gift or special offer, available exclusively to all new ACORN USER subscribers.

*All our software offers are StrongARM compatible.

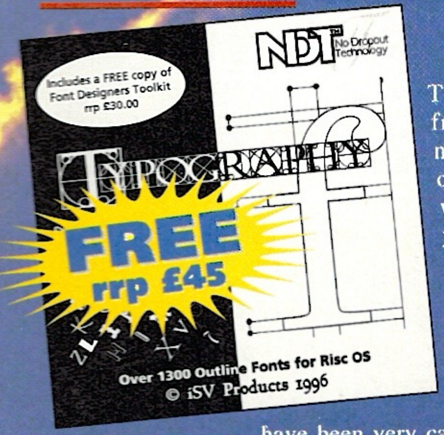
PUBLISH ART 3

NEW OFFER rrp £39.95


Publish Art
3
The Ultimate DTP Resource
ONLY £10
2790
PublishArt Designs, plus
£80 of free software
Smart Desk Top Publishing
the electronic resource company

Your chance to get your work noticed, Publish Art 3 includes only the most useful designs. It is a structured design resource, not just another bundle of pictures making it the perfect choice for education, business or home users.

TYPOGRAPHY


NDT No Dropout Technology
Includes a FREE copy of Font Designers Toolkit rrp £30.00
TYPOGRAPHY
FREE
rrp £45
Over 1300 Outline Fonts for Risc OS
© iSV Products 1996

Typography, from iSV's new generation of NDT Fonts, will improve your print quality no end. Supplied compressed and with an installer the NDT Fonts have been very carefully hinted and scaffolded so that they appear clearer than ever before. Typography includes over 1300 high quality fonts PLUS over 200 bonus fonts never before released as well as a FREE copy of Font Designers Toolkit.

TECHNODREAM

NEW OFFER

TECHNODREAM
FREE
rrp £24.95
SUPERIOR SOFTWARE
Acorn 32 Bit range of computers
£24.95
(inc VAT)

You have been directed by the Terran Defence Agency to pilot the new V7 Terrastormer against the alien forces. Progress through Outer Space, the Satellites of Kirius and, finally, for the fearless few, the Colonised Worlds.

There are 18 increasingly fiendish stages, with brilliant arcade-quality graphics and massive animated sprites. The fast-moving action is backed up by digitalised sound effects and six atmospheric pieces of stereo music. And with the two-player mode, it's competitive - brilliant fun!

SUBSCRIBING HAS NEVER BEEN EASIER

DIRECT Debit

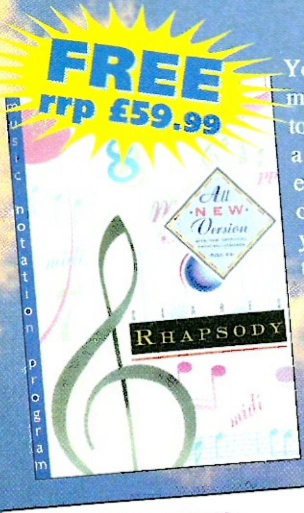
Why not make your subscription even easier and subscribe by Direct Debit, spreading the cost of your subscription over quarterly hassle-free payments. Over a year you will receive 13 copies of Acorn User. What's more, you need never worry about missing an issue again, as the subscription continues until you decide to cancel. Direct Debit subscriptions cannot be taken over the phone or by fax.

TEXTEASE

textease
Word Processor and Desktop Publisher
Only £20
rrp £49
Softease Limited

The most flexible, straightforward and comprehensive word-processor and desktop publisher ever. Use it to make letters, invitations, cards, banners, notices, posters, overhead foils, in fact any kind of text and graphics. It is designed to be ideal for children and is invaluable for older children and adults.

RHAPSODY



Your chance to compose your own musical score. Rhapsody allows you to modify and manipulate music as a wordprocessor does text. You can enter score by hand, note by note, or, if a MIDI Interface is fitted to your computer, you can play a tune using a MIDI keyboard and capture the music in Rhapsody. The music can then be transcribed ready for editing, replaying, etc. In the shops £59.99 as an Acorn User subscriber you can claim it for free!

ANAGRAM GENIUS

FREE
Anagram Genius
Generate your own mindblowing anagrams!
NEW OFFER

Prepare to be astounded! Seven years of development have produced the world's most sophisticated anagram generator. Give the software a name or piece of text and it will use powerful artificial intelligence techniques to rearrange the letters to say wierd and wonderful things about it.

BINDER & TWO FREE MAGAZINES

ACORN USER
ACORN USER
ACORN USER
FREE

Exclusive to Acorn User this binder will hold up to 13 issues of your favourite magazine. PLUS receive an extra two magazines absolutely FREE!

Call our 24-hour Subscription Hotline

Tel: 0870 606 0423
Fax: 01369 701 187
Email: dbscot@globalnet.co.uk

Please quote code 'A9811' when subscribing by phone

Yes! I will subscribe...

1

Name (Mr/Mrs/Ms/Miss).. Age..........
Address ....
....
....
Postcode ....Tel..............................
E-mail address ....

2 Please send me the following FREE Gift/Special Offer (tick one):

4253	☐	Typography	FREE	4705	☐	Binder & 2 magazines	FREE
4247	☐	Rhapsody	FREE	4257	☐	Publish Art 3	£10
4259	☐	Technodream	FREE	4258	☐	Anagram Genius	FREE
4248	☐	TextEase	£20				

3a **There's never been a better time to subscribe so take advantage of one of these offers TODAY. See section 2**

A9811UN ☐ UK £39.99   A9811EN ☐ EU £53.99   A9811WN ☐ World £68.99*

To renew subscription please tick:

A9811UR ☐ UK £39.99   A9811ER ☐ EU £53.99   A9811WR ☐ World £68.99*

*Unfortunately World subscribers are not eligible to receive the free gift/special offer

I wish to pay by: ☐ Cheque/postal order made payable to IDG Media
☐ Credit card (Visa/Access/Barclaycard/Mastercard/Eurocard/Connect)

Expiry date ☐ / ☐   Signature..
Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Instruction to your Bank or Building Society to pay by Direct Debit

DIRECT Debit

3b Please enrol me as a subscriber to *Acorn User*.

4210 ☐ with payments of £9.99 by continuous quarterly direct debit
See section 2.
Your subscription will continue until you cancel.

Name of Bank/Building Society ....
Address ....
....
Name of Account Holder(s) ....
Bank/Building Society Account No. ☐☐☐☐☐☐☐☐
Branch Sort Code ☐☐☐☐☐☐
Date ....Signature(s)..

Instruction to your Bank or Building Society: Originator's ID No. 851412

Please pay IDG Media Direct Debits from the account detailed in this Instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this Instruction may remain with IDG Media and, if so, details will be passed electronically to my Bank/Building Society.

Reference No. AU200

Signature ....
Date..

4 Now send your completed form and payment to Acorn User, IDG Media, FREEPOST, Dunoon, Argyll PA23 7UZ. Please state if credit card billing address is different from the delivery address. Photocopies or handwritten versions of the above information are acceptable.

This guarantee should be detached and retained by the Payer.

The Direct Debit Guarantee

DIRECT Debit

- This Guarantee is offered by all Banks and Building Societies that take part in the Direct Debit Scheme.
- If the amounts to be paid or the payments dates change IDG Media will notify you 14 working days in advance of your account being debited or as otherwise agreed.
- If an error is made by IDG Media or your Bank or Building Society, you are guaranteed a full and immediate refund from your branch of the amount paid.
- You can cancel a Direct Debit at any time by writing to your Bank or Building Society. Please also send a copy of your letter to us.

TECS

Scottish Acorn Show 98

Glasgow Marriott Hotel
8th November 1998 10am - 5pm
http://www.tecs.co.uk/sacs/

NEW Phoebe 2100 (Risc PC II) Systems

Phoebe 2100 32Mb, 32xCD, 6.4Gb HD	£1499
with 15" Ilyama monitor	£1649
with 17" CTX Monitor (3yr warranty)	£1699

LAUNCH OFFER - FREE ADDITIONAL 32Mbwith orders placed before 31/8/98

SA Risc PC & A7000+ Systems

SA 233 Risc PC - call for details of exciting new Acorn trade-in deal. Save up to £ 200 off prices.

A7000+, 24Mb RAM, 1.2GbHD 24xCD, 15" Monitor	£840

Examples only - call for custom configurations

Components & Peripherals

24x & 32x Hitachi CD ROM drives from	£40
16Mb EDO RAM (tested for RPC)	£15
32Mb EDO RAM " "	£25
64Mb EDO RAM " "	£call
15" Monitors (3yr warranty)	£125
17" Monitors (3yr warranty)	£230

We also supply a full range of printers, expansion cards, modems etc. Please call for more info.

Clearance Corner

1Mb Risc PC VRAM (reconditioned)	£15
Risc OS 3.11 Upgrade (new)	£28
ARM 610 Processor (reconditioned)	£25
ARM 710 Processor (reconditioned)	£35
HP Turbodriver Software (new)	£30
Canon Turbodriver Software (new)	£30

Tel 0141 644 4952

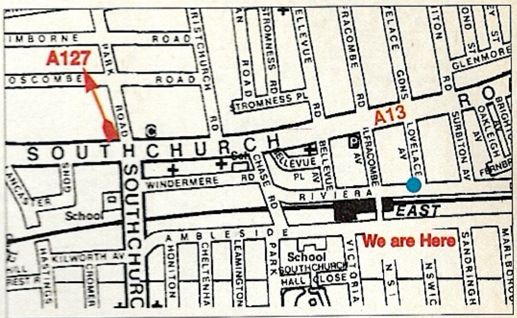
Fax 0141 644 5299
http://www.tecs.co.uk
E-mail sales@tecs.co.uk
140 Busby Road, Clarkston, Glasgow G76 8BG

NB ALL PRICES EXCLUDE VAT @ 17.5%

ESSEX

GeneSys *Custom built systems*

GeneSys for all your Acorn needs, serving Education, Business and Home. High quality custom built systems for Acorn and PC.



IMBORNE ROAD
A127
OSCOMBE ROAD
PARK ROAD
SOUTHCHURCH
SOUTHCHURCH RD
STROMNESS RD
STROMNESS PL
BELLEVUE RD
ILFRACOMBE RD
LOVELACE GDNS
A13
GLENMORE
WINDERMERE RD
CHASE RD
BELLEVUE PL
BELLEVUE AV
ILFRACOMBE AV
LOVELACE AV
SURBITON AV
OAKLEIGH AV
RIVIERA
EAST
School
AMBLESIDE
KILWORTH AV
HONITON
CHELTENHA
LEAMINGTON
PARK
School
SOUTHCHURCH HALL CLOSE
VICTORIA
We are Here
SANDRINGH
MARLBORO

Contact:
Richard Brown

GeneSys, 41 Riviera Drive, Southend on Sea, Essex SS1 2QT
Tel: 01702 462385 Fax: 01702 469224 E-mail: genesys@argonet.co.uk

NORTH EAST

ESM

Unit 10 & 11 YMCA Enterprise Centre
Philadelphia Lane
Herrington Burn
Haughton-le-Spring
DH4 4JW
0191 584 5834

Save upto £500 off Phoebe RiscPC2

Free 32Mb SDRAM Upgrade with Phoebe

CTX 14" Monitor £100.45
CTX 15" EXPERT MONITOR £136.30
CTX 17" MONITOR £235.00 *
CTX 17" Expert Monitor £329.00
* When ordered with Phoebe

esmsales@argonet.co.uk
http://www.argonet.co.uk/users/esm

Prices Include VAT!

SOUTH COAST

CJE MICRO'S

- **Hardware**
- **Software**
- **Installation**
- **Repairs**

78 Brighton Road
Worthing
West Sussex
BN11 2EN
Tel : 01903 523222
Fax : 01903 523679
sales@cje.co.uk
http://www.cje.co.uk/

Open 6 days a week
With demonstrations available

SOUTH WALES

UNIQUEWAY

Acorn

SOUTH WALES' ONLY DEDICATED ACORN DEALER AND ACORN CENTRE OF TECHNOLOGY

Technical Support - Repairs - Hire - Internet Connections

Low cost finance available on all systems.

VISA

AMERICAN EXPRESS

3 Clarendon Road, Cyncoed, Cardiff CF3 7JD
Tel 01222-464020 Fax 01222-440071
http://www.uniqueway.co.uk

CUMBRIA

XEMPLAR

Cumbria Software Systems

Specialist Acorn Dealer

Acorn CENTRES OF TECHNOLOGY

Strong Arm Risc PC, A7000+ and Phoebe
Sales, Repairs, Software, Peripherals

Network design and installation Ethernet, Nexus ATM, Multi-platform networks

Semerc Authorised Dealer

CSS Ltd., Unit 3A, Townfoot Industrial Estate
Brampton, Cumbria, CA8 1SW

Tel: 016977 3779

WEST YORKSHIRE

THE CHOICE OF EXPERIENCE

DAVYN MART

Davyn Computer Services

Printers, Ribbons, Ink Cartridges, Refills
Expert Advice & After Sales Service
***Mail Order** Master Card, Visa, Switch*
Ring for Prices
Service & Repair to all Equipment
Full Range of Acorn Hardware & Software
(We operate the Acorn Finance Schemes)
Full Range of Educational Software
Tel. 01924 254800 Fax. 01924 258036
e-mail sales@davyn.demon.co.uk

For the best service in Yorkshire (we think)

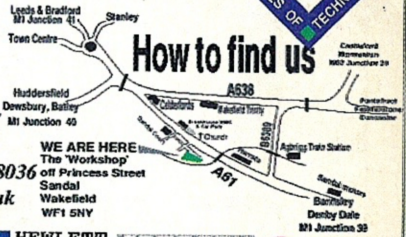
CALL US! for A7000,RiscPC & Pocket Book II

Visit our Showroom

Open 9.30 to 5.30
Mon, Tues, Weds, Sat.
9.30 to 7.30
Thurs & Fri.

Acorn CENTRES OF TECHNOLOGY

How to find us


Leeds & Bradford M1 Junction 41
Stanley
Town Centre
Huddersfield Dewsbury, Batley M1 Junction 40
A638
B6389
Agbrigg Train Station
A61
Barnsley
Denby Dale M1 Junction 38
Church

WE ARE HERE
The 'Workshop'
off Princess Street
Sandal
Wakefield
WF1 5NY

Acorn Pocket Book II · RISC PC · hp HEWLETT PACKARD · CITIZEN COMPUTER PRINTERS · Canon

NORTH WEST

THE 1997 ACORN USER AWARDS
'BEST DEALER'

Entrance to on-site Car Park via Red Gate
WE ARE HERE!
M63 Junction 12 Stockport West
A5145
M63
To M60/M62
Glass Pyramid
A560
Wood St
ONE WAY
A560
To A6

For all your Acorn needs
Visit our Showroom
10am - 6pm
Monday - Saturday

Acorn CENTRES OF TECHNOLOGY

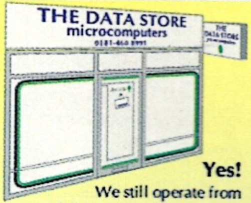
Desktop Projects Ltd
Unit 2A, Heapriding Business Pk
Ford Street
STOCKPORT
Cheshire. SK3 0BT

Authorised Acorn Dealer & Centre of Technology

Desktop Projects Ltd

Tel: 0161-474 0778 Email: info@desktopp.demon.co.uk

LONDON



Yes!
We still operate from a fully-equipped showroom!

Looking for Phoebe 2100?....
...or a repair to a BBC Micro?
OLD OR NEW, IF IT'S *BY* ACORN
OR *FOR* ACORN, COME TO US!
For more information, see our full-page advertisement elsewhere in this issue.

THE DATA STORE
microcomputers

Acorn CENTRES OF TECHNOLOGY

1983-1998
15th Year

6 CHATTERTON ROAD BROMLEY KENT BR2 9QN
Tel 0181-460 8991 ***Fax*** 0181-313 0400
Email info@datstore.demon.co.uk
Web http://www.datstore.demon.co.uk/
CLOSED ALL DAY WEDNESDAY

MIDLANDS & OXFORD

DS

Acorn CENTRES OF TECHNOLOGY

DS

Providing Acorn Solutions For Over 16 Years

Tel :0121 706 8933

Fax : 0121 706 4306

HOW TO FIND US

Daco Systems Limited
459 - 465 Warwick Road Tyseley Birmingham B11 2JP
http://www.daco-systems.co.uk
e-mail: info@daco-systems.co.uk

DACO SYSTEMS

SOUTH EAST

CANNON COMPUTING

Acorn CENTRES OF TECHNOLOGY

Acorn Educational Reseller

Incorporating

CUMANA
The best name in memory

Key independent Educational supplier of Acorn Computers and we have over 14 years experience

See us at Acorn World, stand 40

Talk to us about the special Phoebe Risc PC 2 promotion.

Please see our main page Advert for more details of our products.

Whitegate, Dunmow Road
Hatfield Heath, Bishop's Stortford
Hertfordshire. CM22 7ED
Tel +44 (0)1279-730800 (Cannon)
Tel +44 (0)1279-730900 (Cumana)
Fax +44 (0)1279-730809
www.cumana.demon.co.uk

LONDON & ESSEX

Pineapple Software

Pineapple have been in the Acorn marketplace for over eleven years and we have recently moved into large new premises where you can see a variety of Acorn equipment in action. We specialise in building RiscPCs to your specification and we also supply scanners, printers, harddrives or anything else you may need for your Acorn system. We also undertake repairs and upgrades to Acorn computers. Come and visit us for a chat!

Open 0900 - 1730 Mon - Sat
352 Green Lane, Ilford, Essex IG3 9JS
Phone 0181 599 1476 Fax 0181 598 2343
email:- sales@pineaple.demon.co.uk
http://www.pineaple.demon.co.uk

Acorn CENTRES OF TECHNOLOGY

SUFFOLK

Acorn

CASTLE TECHNOLOGY

Full range of Acorn Computers
Comprehensive back-up service

Call 01728 621222 or fax us on 01728 621179

Ore Trading Estate Woodbridge Road Framlingham Suffolk IP13 9LL
e-mail: sales@castle-technology.co.uk
Web: http://www.castle-technology.co.uk.

the Regan files

David Pilling is an enigma. He's very highly respected in the Acorn world — I've known people who would crack the protection on a lot of commercial software but refuse to pirate David's software on principle — has written not one but several key software packages and has been met in person by hardly anyone. Most people, including the software managers at Beebug, communicate with him exclusively by e-mail. And, in a first for The Regan Files, that's how this interview was conducted.

David is a private person who shuns publicity. But he's no recluse — he's more than happy to help anyone using his software, as those on the *Ovation Pro* mailing list would agree.

One of David's first encounters with computers came while doing a PhD in theoretical physics. Now, while the mainframe computers in those days were relatively fast, time on them was often shared between several departments and rationed out. Therefore, there may have been a delay of days between writing a program and being able to run it. Make a mistake, and it would be several more days before you could correct it.

'The appearance of the BBC model A at 235 quid, with the ability to run your program whenever you wanted, was a great thing,' remembers David. Personal computing had arrived, and before long David had moved on from PhD-related programs to games and utilities.

Mistrusting the career prospects in academia, David bought a PC, an Amstrad 1512, and a lot of books on Windows. Fortunately for us, at that moment Acorn launched the Archimedes and John Wallace at Beebug persuaded David to ditch the Amstrad and write the *Hearsay* comms program instead.

'Relative to other software available at the time it was probably the best program I ever wrote. It even got reviewed in *Personal Computer World*. It is still the best-selling program I've ever done: about 4000 copies.' Unlikely as it seems today, comms was then a minority interest. To keep the money coming in, David started a £5-a-disc budget software library, and also wrote the first release of *Ovation* for Beebug. Much of his budget software was compressed using his own archiving software *Spark*. He included a free decompressor, which doubled as an advertisement for *Spark*, called *SparkPlug*. Well, I laughed.

'*Ovation* proved a lot harder to write than anyone imagined. At the end of the day we were soundly beaten by Computer Concepts with *Impression*. CC I am sure understood the importance of being first in the DTP/WP field. There would be no prizes for coming second.

'We started *Ovation Pro* in 1993, it was designed to take on *Impression Publisher* and for every *Publisher* feature we would have a corresponding but better feature. It turned out to be a huge heavyweight piece of software, hundreds of files of source code. The only snag was that it was to be nearly five years before it was finished. Along the way the world changed, the Internet took off, CC pulled out and the Acorn market became a lot smaller.'

> **'CC I am sure understood the importance of being first in the DTP/WP field. There would be no prizes for coming second'**

David filled in his time while writing *Ovation Pro* by producing a set of TWAIN drivers to connect scanners to the Acorn — he's currently writing a new user interface for these. 'Ideally I would have only ever written one program — *Hearsay* — and I would have just kept improving it over the years.

'Instead, one has to bring out something new, sell a couple of thousand copies (if you're lucky) and then switch to a new area. In other words you don't find *Quark* producing scanner drivers to fund the development of *its* DTP program.'

'I wish I knew where things were going. Every six months someone from Acorn says: "We see no future for RISC OS". Since the game for software developers is to be a couple of years ahead of events, as soon as Acorn have said this just once, every competent software developer should be gone.' (It should be pointed out for the record that David is both a competent software developer and still very much in the market).

'All Acorn ever had to do was make the world's best Desktop computer and they'd have been safe. It seems to me Acorn's frittered away an outstanding opportunity on lots of peripheral projects that might come good but probably won't; The 'Electron' experience of the BBC days repeated over. The Java-enabled toaster or washing machine market might be a big one, but it won't require unique skills to compete in.

'If I were in charge I'd play the multiprocessor card now, put a load of StrongARMs in a box along with an OS that could make use of them, and produce hardware slanted enough to some area of the market — video, music or whatever — that they might actually start to sell to new users.'

'Back when I was a student' concludes David 'the joke was "Are we going to work today or play with computers?" I've enjoyed my time on planet Acorn. Acorn owners and developers are certainly friendly and decent people. For my part I've tried to keep everyone happy rather than be a ruthless businessman.'

And based on David's reputation with the rest of the market, I think he's succeeded.

Jill Regan

PHOEBE 2100

Fabulous offer for all Pineapple Phoebe customers - Don't order your Phoebe until you've seen our offer at Acorn World!

Min spec:- 233Mhz SA, 32Mb Simm, 4Mb Vram, 6.4Gb HD, x32 slot CD. Final Price:- £1499 ex vat (no mon) or £1649 ex vat with Iiyama 15" mon.
Order your Phoebe now with just £100 deposit and get the best Phoebe deal around!

New Acorn Computer prices and deals for Clan members!

Basic models - **SRP20, 1.2HD, 4Mb - £ 825 inc vat. SRP21, 1.2HD, 4Mb, x8CD - £ 839 inc vat**
Trade in deals (trade-in any other computer) **SRP26A, 1.7Gb HD, 10Mb, x8CD - £ 949 inc vat**
SRP41 1.7Gb, 34Mb, x24CD, Java - £ 1049 inc vat
The above computers can include a DX4-100 PC Card or an internal modem (28k) for £58.75 extra. (586-100 PC Card at £88.12)

Special Pineapple Computer price deals

Deal 'A' **233Mhz SA, 1.2Gb harddrive, 2Mb video memory 36Mb simm memory, x8CD - £ 929 inc vat**
Deal 'B' **233Mhz SA, 4.3Gb harddrive, 2Mb video memory 36Mb simm memory, x32CD - £1129 inc vat**
'High Spec' **233Mhz SA, 4.3hd, 2Mb vram, 36Mb simm, x8CD, 586-100 PC Card, PCPro & PC Exchange, Windows98, 15" digital monitor, 120 watt speakers - £ 1699 inc vat**
Monitors when bought with any computer:- 14" Digital £99, 15" Digital £ 149, 17" Digital £ 269
All computers are supplied with Studio 24 v1 software and one years subscription to the Virus Protection Scheme.

New Acorn finance. 0% no deposit finance payable over 6 months. Please 'phone and ask for details

General Upgrades

Harddrives - (p/ex for new RiscPC 1.2Gb HD)

1.7Gb Harddrive	£ 55.00
2.0Gb Harddrive	£ 65.00
2.5Gb Harddrive	£ 75.00
4.3Gb Harddrive	£ 99.00
6.4Gb Harddrive	£ 139.00

Other sizes available - please ask

Backplanes

2 slot backplane	£ 34.00
2nd Slice (inc 4 slot backplane)	£ 89.00

Midi Card

MIDIMax II - Midi Card	£ 92.83

RiscPC Memory

1Mb VRam	£ 69.00
2Mb VRam	£ 89.00
8Mb SIMM	£ 14.00
16Mb SIMM	£ 24.00
32Mb SIMM	£ 33.00
64Mb SIMM	£ 129.00

PC Cards & Software

DX4-100 PC Card	£ 229.00
586-100 (Acorn) PC Card	£ 329.00
586-133 (CJE) PC Card	£ 351.33
PC Pro & PC Exchange	£ 49.95
Windows 98 (Installed for you)	£ 79.00

Monitors

Acorn 14" AKF60	£ 264.00
Iiyama 17" 400 (S701GT)	£ 363.00
Iiyama 17" 400 Pro !NEW!	£ 385.00

CTX mons have (3 year on-site warnty)

CTX 14" Digital Scan	£ 139.00
CTX 15" Digital Scan	£ 175.00
CTX 17" .28 70Khz Digital	£ 299.00
CTX 17" .26 92Khz Digital	£ 385.00

Internet

56,000 Flex modem - Flash U/G	£89.00
Acorn !Browse (CD only)	£39.99
Ant Internet Suite software	£116.33

Flatbed Colour Scanners

There are now a growing number of scanners which will work on RiscOS. The Epson GT5000 and the Plustek work on the parallel port so no extra interface is required.
All our scanner prices include Twain and Imagemaster software. SCSI scanner prices do not include the SCSI connecting cable. Studio24Pro instead of Imagemaster - just £30.00 extra!

Epson GT5000 parallel	£239.00
Epson GT5500 SCSI	£259.00
Epson GT9500 par&SCSI	£519.00
NEW!!Plustek Optic Pro New low price!	£129.00

SCSI Cards & Cables

Cumana SCSI II Card	£175.00
EESOX SCSI II Card	£145.00
50 mini 'D' to 50 Centronics	£16.00
50 mini 'D' to 25 'D' plug	£16.00
25 'D' plug to 50 Centronics	£13.99

Switch Boxes

These are ideal for parallel port switching between a printer & scanner

Parallel 2 way	£16.99
Parallel 4 way	£19.99
Serial 2 way	£19.99
25 'D' plug to 25 'D' plug	£4.99
25 'D' plug to 36 Centronics	£4.99
Monitor+Keyboard 2 way	£17.99
15way HD to 15way HD cable	£4.99
Male-male mini DIN keybrd cab	£3.00
Mini DIN to 5 pin keybrd adptr	£1.50
5 pin DIN to 5 pin DIN keybrd	£2.50

Many other types also available please ask

Hard Drives

Pineapples removable drive system is available for IDE and SCSI systems.

IDE removable system	£19.00
SCSI removable system	£25.00
IDE or SCSI cable	£5.00

Bare IDE harddrives

1.2Gb IDE !!!!	£50.00
1.7Gb IDE	£79.00
2.0Gb IDE	£99.00
2.5Gb IDE	£109.00
4.3Gb IDE	£124.00
4.3Gb IDE (Cyclone 5.25")	£139.00
6.4Gb IDE	£159.00

IDE Expansion

x4 IDE Expansion card	£69.00

Bare SCSI harddrives

1.0Gb SCSI	£99.00
4.2Gb SCSI	£219.00
6.4Gb SCSI	£299.00

ZIP parallel port drives

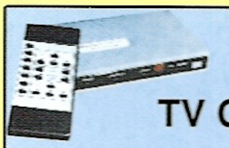
Iomega parallel port ZIP drive	£149.00
Iomega SCSI internal ZIP	£129.00
Iomega internal IDE ZIP (for use with IDE expansion card)	£75.00
100Mb ZIP cartridge	£9.99
Pack of 5 Zip Cartridges	£45.00

Studio24Pro

'Many Acorn User front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool'- *Acorn User Mar96*

Now just ★ £99.00 ★

Users note FREE update v2.16 is now available.



PAL TV Coders

We now have two PAL TV coders available which allow the output of any Acorn Computer to be displayed on a normal TV or recorded onto a video recorder. Both models have S-VHS as well as standard video outputs. The VGA converter works in VGA and SVGA screen modes and is ideal for the RiscPC. Please ask for more info.

VGA Converter PAL Coder	£159.00
PLC/4 PAL Coder (mode 12,15) for A3020,A4000,A5000,RiscPC	£99.00

Pineapples Virus Protection Scheme has been running for over five years and is still being updated with new viruses on a regular basis. New software versions are sent out to members every three months and the total number of viruses which can be removed is over 100.

Joining fee just £28.20

Inexpensive multi-user licences

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternative - 'Acorn User Feb 96

As an Acorn Centre of Technology Pineapple Software can help you with ALL your Acorn computer related problems.

Colour Printers

Canon BJC80 - portable col	£233.00
Canon BJC250	£149.00
Canon BJC620 - colour	£229.00
Canon BJC4300	£198.00
Canon BJC4550 (A3)	£287.00
Canon BJC5500 (A2)	£649.00
Epson Stylus 200 mono	£139.00
Epson Stylus 200 colour	£179.00
Epson Stylus Colour 400	£129.00
Epson Stylus Colour 600	£159.00
Epson Stylus Colour 850	£279.00
HP Deskjet 690C	£259.00
HP Deskjet 870C	£369.00
HP Laserjet 6L (laser mono)	£279.00

Other Items

Acorn !Browse (CD only)	£39.99
Acorn RiscCafe (JAVA)(CD)	£39.99
RiscOS 3.7 upgrade	£58.75
RiscOS3 PRM vols 1-4	£99.95
RiscOS3.6 PRM vol 5a	£29.75
Sibelius Junior v3.0	£55.00
Sibelius 6 software v3.5	£115.00
Sibelius 7 Student v3.5	£351.00
Sibelius 7 software v3.5	£699.00
Acorn Netstation (Ethernet)	£351.33
Acorn Netstation (Modem)	£351.33
A7000 upgrade to A7000+	£249.00

We have many items in stock which are not shown in this advert. Please ask for anything you require which may not be shown. We also undertake repairs and upgrades to all Acorn computer models. Collection can be arranged if necessary.

Pineapple Software

352 Green Lane, ILFORD
Essex IG3 9JS
Tel 0181 599 1476 Fax 0181 598 2343
email:- sales@pineaple.demon.co.uk
www:- http://www.pineaple.demon.co.uk

Terms:- All prices *include* 17.5% vat. Carriage £15 on computer systems. £5 on most other hardware. Other items free. Phone for quote outside UK.Official orders, cheques and all major credit cards accepted at no extra charge.

'Pineapple offer some of the finest and friendliest after sales support you will find' - Acorn User Mar 96

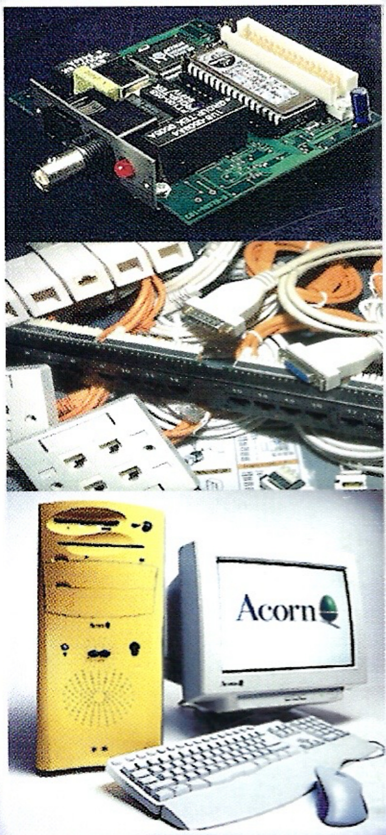
Why not come and visit us and see most of the Acorn range of computers and hardware.
Monday - Friday 0900 - 1730
Saturday 1000 - 1700

CENTRES OF TECHNOLOGY Acorn CENTRES OF TECHNOLOGY

Providing the link...

Acorn World 98
16th-18th October
London Arena

Stand
60



ATOMWIDE
Connecting schools to the 'National Grid'

National Grid for Learning? Mixed-platform networking? Internet access? Legacy systems integration? Windows NT Server migration? Beleaguered Acorn enthusiast?

Whatever challenge you are facing, Atomwide can help. We have over a decade of experience developing for, and networking, Acorn and PC computers in a way conducive to the needs of an educational environment.

From initial conception to final solution – ATOMWIDE

ATOMWIDE
NTUsers
ART
NTFiler
ATOMWIDE
INTRODUCTION TO
NETWORK DESIGN
ND INSTALLATION

ATOMWIDE
Unit 7, The Metro Centre, Bridge Road,
Orpington, Kent. BR5 2BE
Tel 01689 814500 Fax 01689 814501
e-mail: sales@atomwide.co.uk
http://www.atomwide.co.uk/

CISCO SYSTEMS
RESELLER

Acorn

NETSCAPE
Alliance
AFFILIATE*plus* PARTNER